

# WOODNEWS

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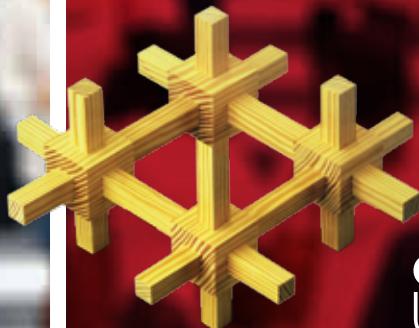
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## Mumbai WOOD

### MUMBAIWOOD 2017 ALL SET FOR NEW RECORD OF VISITORS!

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MELIA DUBIA IS  
THE NEW  
'GREEN GOLD'

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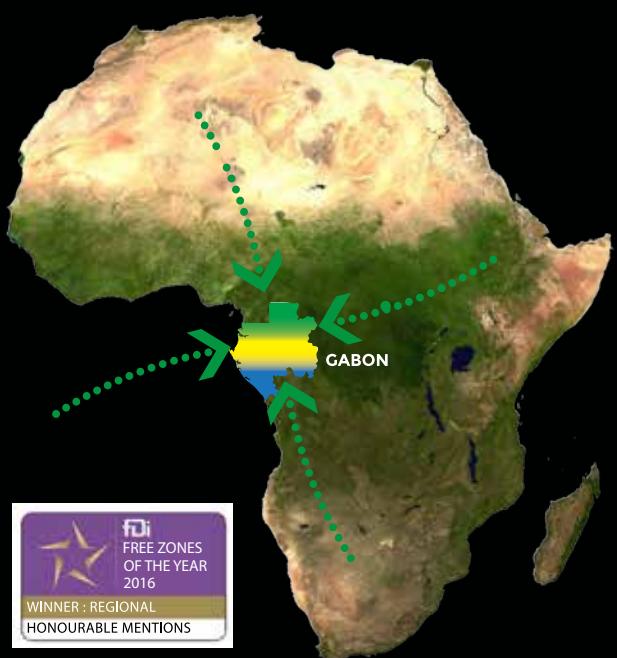
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Printed by:  
Repromen Offset Printers Pvt. Ltd., Bangalore, India.

WoodNews is published bi-monthly by PDA Trade Media, a division of Pradeep Deviah and Associates Pvt. Ltd. Material from the magazine may be reproduced, in part or in full, only with prior permission and giving due credit to the source. Articles express the views of the authors, not necessarily those of the management. No responsibility is undertaken for the absolute accuracy of information published. All correspondence, including material for publication, may be addressed to the Chief Editor.

ISSN No. 0971-6734



PDA Trade Media, A Division of Pradeep Deviah and Associates Pvt. Ltd.,  
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Tel.: +91-80-4250-5050 Fax: +91-80-2551-3078

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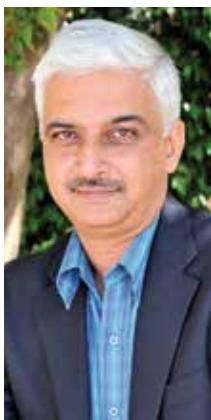
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# GST fallout: machinery cheaper!



Hello Readers,

The implementation of the game-changing Goods and Services Tax, which came into effect in July this year, still holds centrestage – as much on account of the ambiguities and (seemingly) complex procedures as for its expected ramifications on conduct of business in the long run and the nation's economy at large. The government has relaxed initial deadlines for compliance and penal provisions will kick in much later, after the system has

very exciting; and exhibitors are encouraged by that. IndiaWood, scheduled for March 2018, is also headed towards unprecedented interest from both the supply and demand sides of our industry. There's more to read on both the shows in the pages inside.

Keeping in mind the severe scarcity of wood for furniture, construction and fibre boards that is staring India in the face, the need to revive agro-forestry and promote plantation timber has come into sharp focus. Not a bit late, the Union government is now considering removal of restrictions on felling, transport and sale of trees grown on private land. It has also decided to help states with dedicated electronic platforms where trees on non-forest land can be verified through geotagging. The move will not only help farmers earn additional income from farmland but also reduce the country's dependence on import of wood. In this issue, we highlight a pilot project on the Karnataka-Tamil Nadu border, initiated by one among us!

Last, but not least, we also take a look at the well-known "wonder tree", but this time for wood. Yes, the coconut tree and its shell yield fibres that can be engineered to help augment the supply of natural wood! The technology is indigenous, the machinery is manufactured in India, there is an abundance of coconut fibre, and now its commercial use has been proved by a factory in Andhra Pradesh. All of this is being done with the help of the Central Institute of Coir Technology, under the aegis of the Coir Board of India.

Until we meet at MumbaiWood 2017!

## FROM THE EDITOR

DHANANJAY SARDESHPANDE

settled into some modicum of stability.

However, over time, there is bound to be greater clarity, fine-tuning of processes and maybe even revisions in the tax slabs. And, as two people in the furniture industry have pointed out in separate articles in this issue of *WoodNews*, the entire eco-system stands to benefit from it. The good news is already out: with reduction of input costs, capital expenditure in setting up a new factory, or upgrading technology for furniture production will be cheaper!

Coming up next is MumbaiWood 2017, now in its third edition. The response from potential visitors (gauged from the frantic pre-registration process at PDA Trade Fairs) is

## STAYING IN TOUCH

In keeping with the times and for ease of communication, *WoodNews* has discontinued the printing of Business Reply Envelopes with each issue of the magazine.

However, we continue to welcome your views and reviews of happenings in the industry, your contributions to and suggestions for the magazine, as well as business proposals via email.

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We look forward to hearing from you soon!

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# Malabar Neem is the new 'green gold'

With a severe scarcity of wood for furniture, construction and fibre boards staring India in the face, the need to revive agro-forestry and promote plantation timber has come into sharp focus. **Mr. T. Gopi**, MD of Bengaluru-based machinery manufacturer WoodTech Consultants, has initiated a project to cultivate *Melia Dubia* on the Karnataka-Tamil Nadu border as a touchstone.

**1** Mr. T. Gopi of WoodTech Consultants on his 16-acre plantation in Tamil Nadu.

**By Dhananjay Sardeshpande**

That there is an across-the-board gap in timber supply for the plywood, fibre board and furniture industry in India is a well-known fact. With the country on a high growth trajectory, this demand-supply gap is getting more acute with each passing year.

Seeking to make a fast buck, unscrupulous traders and suppliers sometimes play spoilsport by hoarding stocks to jack up prices in the market. If raw material itself is not assured and available at reasonable rates, how can the woodworking industry grow or survive?

On the other hand, points Mr. T. Gopi, Managing Director of Bengaluru-based WoodTech Consultants Pvt. Ltd., India has great agronomic climate and vast tracts of uncultivated or semi-arid land that can be put to good use to sustainably generate its own timber resources. "In the West, especially in New Zealand, agro-forestry is a very big contributor to their GDP (gross domestic product)," he notes.

WoodTech manufactures and represents reputed brands from across the globe in solid wood and panel processing machinery and furniture finishing plants.



1

In an attempt to walk the talk, Gopi initiated the cultivation of *Melia Dubia* over 16 acres of private land in 2016. If his pilot project succeeds, he says, there will be many more "green startups" and new-age investors who will back his nascent revolution to make India green and self-sufficient in timber.

Agro-forestry is not a new concept, he agrees, but agriculture in India is failing. "Agro-forestry can step in to arrest the slide in our largely agrarian economy. It will not only contribute to farm income, but can also replace traditional crops and vegetable cultivation, especially in semi-arid areas, to yield higher economic returns," he insists.

## The economics

Among the problems besetting agriculture in India are small and unsustainable land holdings, increasing cost of inputs such as seeds, fertilisers and pesticides, depleting soil fertility, the rising cost of transportation, dearth of storage infrastructure and a severe scarcity of manual labour.

Add to it the fluctuations in weather and market pricing and middlemen controlling access to markets, and you have farmers' buckets of woes overflowing.

While this has hit the agricultural economy

## Govt. to ease timber harvest from private plantations

The Union government is considering getting states to agree to remove restrictions on felling, transport and sale of trees grown on private land to encourage agro-forestry. It has also decided to help states with dedicated electronic platforms where trees on non-forest land can be verified through geo-tagging.

The move will not only help farmers earn additional income from farmland but also reduce the country's dependence on import of wood. Taking note of the agriculture ministry's proposal, the environment ministry has written to states asking them to list their suggestions.

It requested states to bring rules for liberalising felling and transit regime for tree species grown on non-forest and private land. The issue was also discussed with representatives of states in a national consultation held in July. Though some states, including Rajasthan, expressed reservations citing lesser area in states under forest cover, majority of states agreed to such changes in existing rules.

The environment ministry's guidelines to states are aimed at bringing clarity and long-term certainty so that private land owners, farmers, industries and others who control and own non-forest land can be encouraged to invest in tree plantations. It also enlisted the species which can be preferred for agro-forestry.

The Prime Minister wants to see large-scale plantations on rural non-agricultural land: alongside roads, railway lines and canal banks. The government is seeking to remove current regulations that restrict felling, transport and sale of trees grown on private land. – PTI



2

very hard in recent decades, the price of land itself has skyrocketed. Both are seen as ample reasons for rural households to sell farm land and relocate to cities in search of regular incomes through non-agricultural job opportunities.

"The easiest way to increase agricultural income per acre is by planting *Malai Vembu* (as it is known in Tamil and Malayalam) to fetch a handsome price in the market, with assured buyback, and with low expenditure on planting and maintenance," Gopi notes.

Minus the cost of land itself, preparation of a 1-acre plantation and saplings cost Gopi Rs. 20,000 in the initial year. He estimates it will take another Rs. 30,000 per year to maintain the land, water and prune the trees. Over 5 years, he estimates inputs to cost Rs. 1.7 lakh.

An acre can easily support 450 trees that can each yield 1 tonne of timber. "That adds up to Rs. 20 lakh at the end of 5 years, better than any other financial savings instrument or even the stock market!" Gopi claims.

### 'Green gold'

*Melia Dubia* grows in tropical moist deciduous forests on elevations of 600 metres through to 1,800 metres in such diverse geographies as Kerala, Karnataka, Andhra Pradesh and Tamil Nadu in the South, to the Himalayan foothills, Sikkim and Assam in the North, as well as in the hills of Odisha.

Widely known as Malabar Neem, it is an indigenous rapid-growing tree, whose wood is already well known for use in match-stick and pencil making, bio-pulp for paper, and for

2 There is adequate space between trees for intercropping: vegetables, spices, green gram or groundnut crops can be extracted in the first couple of years.



3

plywood manufacturing. Also known as *Melia Composita*, it is a forest-growing tree that is very suitable for plantations and agroforestry.

Its high calorific value makes it a viable source of feedstock for biomass power plants. Its leaves serve as fresh feed for cattle and goats. However, long-term cultivation (harvesting after 8 years) ensures mature and good quality timber, and such wood can be used even for furniture and construction.

Stools, benches, wooden tables, interior decoration, window and doors, wooden racks and packing pallets, ceiling planks, agricultural implements and even outriggers for catamarans (boats) can be fashioned out of its mature wood.

What is more, *Melia Dubia* is often grown along with other trees such as teak, nutmeg and coconut. Inter-cropping with vegetables, bananas, groundnut, green and black gram cab be practised in the first year of planting, and spices in later years. This gives farmers the sustenance they need in the initial years after planting.

In addition, *Melia Dubia* plantations increase the green cover and act as natural carbon sequestration reservoirs in the rural landscape. In other words, it is “green gold” for the long-suffering agricultural economy.

#### IPIRTI nod

A *Melia Dubia* tree achieves full growth in about 8 years, can rise 20 metres off the ground, with a straight trunk of 10 metres and

a girth of about 1.2 metres, after which its branches spread to support its foliage. Because it grows so rapidly it is often used for reforestation of degraded lands.

The sapwood is greyish white. The heartwood is light pink, turning pale brown on ageing. The best method of dealing with the timber is to convert the logs immediately after felling and to open-stack the sawn material under cover.

Its timber peels well and produces clear veneer. The veneer dries well and quickly, and has excellent adhesion properties. It produces good quality, light weight plywood, comparable to Okume plywood. Okume plywood is very popular in the West and sells at a premium.

The Bengaluru-based Indian Plywood Industries Research Institute (IPIRTI) has also recommended *Melia Dubia* plantations over water-guzzling Eucalyptus cultivation. *Kaadu Bevu* (as it is known in Kannada) consumes less water compared to Eucalyptus and can grow to a girth of 1 metre in well-irrigated areas.

In a speech at the South India Plywood Manufacturers' Association in 2016, the then IPIRTI Director, Mr. B.N. Mohanty, was quoted as saying, “We found it to be conforming to better ecological standards, while offering more strength and girth suitable for the wood-based panels industry. Its peeling qualities can help fetch the best veneers for the plywood industry.”

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### Tax-free income

Mr. O.S.K. Reddy, proprietor of Visakhapatnam-based S. Kumar's Agri Business Corporation, recently wrote in a LinkedIn post that in light of the huge demand-supply gap for wood, *Melia Dubia* plantations offer a quick-fix solution that can earn tax-free agricultural incomes.

4      *Melia Dubia*  
nursery run by  
Aadithya  
Agroforestry.

Noting that the majority of the world's wood supply is sourced from native forests that are not sustainably managed, Reddy quotes a research report to say that plantations are expected to meet 35% of projected global demand for industrial wood by the year 2020, rising to 46% by 2040.

"This level of production, to meet ever-growing demands, would require a significant increase in plantation area," he wrote. Today, plantation-grown wood is estimated to account for a mere 3% of the world's wood resources. The economic benefits of investment in the timber sector will also provide relatively high returns for the low risk they carry, Reddy believes.

According to Reddy, in a high-density plantation up to 1,600 saplings can be planted in an acre, and a yield of up to 40 tonnes per acre is possible from a 5-year-old harvest. Presently *Melia Dubia* fetches Rs. 7,300 per tonne for billets of girth 50-120 cm.

Each tree attains a volume of 15 cubic feet at the end of 12 years and earns Rs. 350 per cubic foot from the 5th year onwards. "If proper

value addition is done at the farmer's place by converting logs into veneer, the expected income from selling veneer would enhance income 2 times over that of selling logs," he notes.

The estimated income from a common facility centre – where a peeling lathe costing Rs.50 lakh is commissioned – would be to the tune of Rs. 5.5 crore per year from processing logs of captive plantations spread over 25 hectares, he suggests.

### Tree growth

In nurseries, the seeds are sown in March-April, in raised beds by treating the seeds with cow dung solution. It takes two months for the seeds to germinate; but the percentage of seeds growing into saplings is as low as 10%. The seedlings need to be cared for in the nursery for the first six months.

Juvenile stem cuttings and coppice from older trees respond better to rooting and the pencil-thick cuttings need to be taken for propagation. Thin shoots are easily susceptible to root rot, so they should be placed in a sandy medium and watered twice a day. Provision for drainage is a must.

*Melia Dubia* can also be successfully grown in dry regions with supplemental irrigation.

As *Melia Dubia* is a forest species, it doesn't need chemicals to grow. Vermi-compost and organic manure made from cow dung, dry leaves and sugarcane straws make for ideal nutrient source for the tree. Instead of chemical pesticides, Neem and Citrus oils, garlic and salt sprays are recommended.

Preparation usually begins soon after the onset of the South-West Monsoon, with each sapling requiring a pit of 2'x2' treated with farm manure. Planting begins 10 days later, after fortifying the soil with Phospho bacteria, Azospirillum, Trichoderma Viride, Pseudomonas and vesicular arbuscular mycoriza.

According to Reddy, the recommended spacing between each sapling is 3.5 metres. Regular irrigation is required in the first year, followed by drip irrigation every 15 days in non-rainy days, application of fertilizers once in three months for the first 3 years, and pruning of low branches every six months. That is low maintenance indeed!



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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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# Processing hub for top-notch furniture

Jodhpur-based Asia Pacific Exports sets up sawmill and factory with European and US markets in mind



1

The Gabon Special Economic Zone (GSEZ) is a successful public-private partnership project between Olam International Ltd. of Singapore, the Africa Finance Corporation and the Gabonese Republic. The West African nation is fast emerging as a manufacturing hub welcomes entrepreneurs from across the globe to benefit from the business opportunities unlocked by SEZ at Nkok.

**1 Abundant supply of Okoume helps makes Gabon an important exporter of highly-valued veneer and plywood.**

The SEZ has around 120 customers from 17 countries, which includes more than 42 industrial entrepreneurs from India, or of Indian origin.

Mr. Sunil Kumar of Asia Pacific Exports (APE), a reputed furniture manufacturer from Jodhpur (Rajasthan), has explored Gabon in last 6 years and has established a furniture manufacturing unit and face veneer plant in Gabon SEZ at Nkok. He has recently started construction of a saw mill as well in this SEZ. Sunil spoke exclusively to *WoodNews* about his experience of establishing his units in Gabon SEZ.

## The motivation

APE is currently running a face veneer plant with three peeling lines and has a processing capacity of 10,000 cubic metres of logs per year. By the end of 2017 the processing capacity of this plant will be augmented to 15,000 cubic metres of logs per year.

APE has also set up a furniture manufacturing unit in the Furniture Cluster of Gabon SEZ, where it is currently manufacturing school furniture for the Government of Gabon, and also meeting export orders from Europe.

APE has also started construction of a saw mill with a processing capacity of 36,000 cubic metres of logs per year which and it will be operational by early 2018.

"We started the face veneer plant in Gabon SEZ because the raw material: Okoume is available in plenty. Moreover, sustainable forest management (SFM) practices in Gabon ensure long-term sustainable supply of timber," Sunil noted.

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The main reason for setting up a furniture manufacturing unit was the sustainable supply of the timber species like Beli, Mouvingui, Wenge, Tali, Padouck and Kevazingo, which are in high demand in European and US markets.

"Our customers and major import houses in the US and Europe have taken a resolution to source minimum 30% of furniture done with SFM-compliant or FSC-certified wood by 2020, and this SFM-compliant wood with genuine traceability and legality certificates is easily available in Gabon," Sunil adds.

#### **Western markets**

The quality of raw material, its availability, and the vast variety of wood species found in Gabon is a unique opportunity for any furniture manufacturing unit. Matured wood of any size, any length is available in good quantity on a sustainable basis.

Solid wood furniture made from various wood species like Beli, Mouvingui and Wenge is of interest to many major furniture retailers.

"We will soon start manufacturing upscale furniture for our existing buyers in European and US markets. Furniture majors like Wolf Mobile (Germany), Artemano (Canada), Terry and Williams-Sonoma (USA) and Habufa (the Netherlands) have expressed interest to buy furniture manufactured from sustainably harvested wood available in Africa," Sunil says.

There are about 10 furniture manufacturing units, 15 face veneer units and an equal number of saw mills operational inside the SEZ. Doesn't APE foresee any shortage of raw material in times to come?

"Not at all," insists Sunil. "There are more than 40 logging companies in Gabon from whom the SEZ units can buy raw material directly. GSEZ, the development and management authority, is also supplying logs to wood processing industries at their factory doors under their business facilitation mandate."

Moreover, the species and grade of round logs required by different type of wood processing industries are different; therefore they are not competing with each other for the raw material.

As per official estimates, Gabon has an exploitable timber stock of 400 million cubic metres, and given a rotation cycle of 25 years under SFM rules, only 16 million cubic metres of round logs can be harvested annually, which can sustain at least 10 times the wood processing units currently under production or under construction.

#### **Ease of business**

What about the challenges he faced in setting up a new business in a foreign country? "The support and facilitation offered by GSEZ is truly exceptional! A dedicated relationship officer is nominated for each investor in the SEZ for all necessary documentation, approval processes and general coordination," Sunil said.

Further, the single-window clearance facility located within the SEZ makes it very easy to procure the required approvals and permits for setting up and operating an industry from all relevant 17 departments.

"It took us just 15 minutes to register the new company for our saw mill operations, as ▶



**Gabon SEZ is a promising destination for investment in the manufacturing sector, and especially for wood transformation.**

**– Mr. Sunil Kumar, Asia Pacific Exports.**



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opposed to the 7-8 days it took in year 2012-13. You can finish construction of a typical factory shed in just six months. Surprisingly, the costs of obtaining permits, construction and start of operations have reduced over the years with more and more companies coming to establish processing units in the SEZ," Sunil adds.

**2** There are about 10 furniture manufacturing units, 15 face veneer units and an equal number of saw mills operational inside the SEZ at Nkok.

The general estate management (roads, street lighting, security and cleanliness) in GSEZ has been remarkable and there are no unscheduled power cuts. Sunil points out that there is a good opportunity for Indian entrepreneurs to also set up ancillary and support facilities such as packaging material, metal processing, nickel-bronze plating and the metal industry.

#### Political stability

Gabon has been a stable country since its independence in 1960, and has stuck to a strategy that is favourable to investors. "We took the decision to start our operations here because Gabon SEZ is situated in the right place and all forms of connectivity – from inland waterways connecting to ports, roads and railway access – for sourcing raw material and evacuation of products," says Sunil.

Additionally, any unit establishing in this SEZ will benefit from exemption of import duties on raw material, plant and machinery, as well as export duties. "I would say Gabon SEZ is a promising destination for investment in the manufacturing sector, and especially for wood transformation," Sunil signs off.



**3** Major import houses in US and Europe have decided to source minimum 30% of furniture done with SFM-compliant wood by the year 2020.

**4** There is sustainable forest management of more than 20 species of trees for timber.

Okan	Padouk	Kevazingo	Wengé	Beli
Movingui	Niové	Sepeli	Sipo	Azobé
Dabéma	Dibélo	Ebiara	Doussié	Izombé
Irako	Kosipo	Acajou	Bossé Clair	Bilinga

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# What is 'Cutting 2.0'?

From hand tools to carbide tips, high-speed saws to laser milling, technology has come a long way

The basic theory of cutting technology has not changed since its introduction in the early 1960s. A cutting tool or cutter removes material from the work piece by means of shear deformation. Ever since the invention of cutting there had always been the principle that chips are to be guided into a gullet in front of the tooth.

The first carbide-tipped circular saw blade came into production in the 60s and carbide-tipped saw blades began to boom in the wood industry – even though at the time carbide saws were still extremely expensive. However, what was missing from all of these concepts, developments and attempts was a holistic approach to cutting.

**1** The panel sizing saw blade 2.0 was presented by AKE Knebel to the public for the first time at Ligna 2017.

The extent of knowledge prior to 2013 was limited by the use of conventional methods with side-effects such as noise and injury because of sharp cutting edges.

Many research institutes have been working to reduce the noise generated by circular saw blades and make them safer to use. In 2006, an attempt was made by the Braunschweig University of Technology, together with experts in the industry, working under the project name “-10dB”. Their goal was to reduce noise levels by this amount in comparison to conventional tools.

They discovered that the noise was generated partly by the large chip gullet and partly by the large teeth and their cutting edge geometry. As a result, tools were developed that were subsequently marketed with a noise reduction of -3 dB. Better values were also achieved in exceptional cases, but these are not widely used to date.

## AKE story

AKE Knebel, one of the pioneers of cutting



**1**

and tool design, manufactured the first carbide-tipped circular saw blade in 1960 and has remained a leading player worldwide since. By the end of the decade things started to look up and over the next 50 years it grew into a company operating worldwide.

By 1975, existing grinding machines were no longer good enough to manufacture tools to the level of quality expected, prompting the company to build their own “AKEmat” machines that became popular with customers throughout the world.

Subsequently, laser cutting technology was introduced, along with the production of milling cutter saw blades and diamond saw blades. Several patents and trail-blazing innovations, such as the Mustang solid wood circular saw blades or the Bombastic circular saw blades for machining aluminium, significantly boosted the market position of the company.

## Cutting 2.0

The cutting 2.0 story began 4 years ago when the ‘SuperSilent’ saw blade, a revolutionary

# for plywood & MDF profiles



# Profile wrapping MACHINERY

- Wooden veneer in strips
- Optionally paper foil from the roll
- EVA/APAO Hotmelt glue application
- Modular construction system



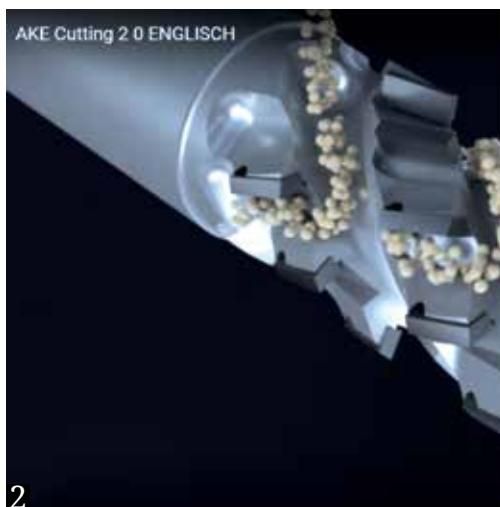
saw blade for sliding table saws with manual feed, was presented.

The technology has proven to be extremely successful since it was introduced to the market in 2013.

From the original sliding table saw with manual feed, the machine has been

**2** 'Cutting 2.0' means chips are discharged behind the cutting edge, reducing the need to carry out repeated chip cutting and resulting in a noticeably longer tool life.

**3** A true world-first are AKE Knebel's 2.0 DP shank cutters in Harmony design from 6 mm onwards.

**2**

consistently developed and expanded, starting with the cutter range and now moving on to panel saws with mechanical feed. Meanwhile, significant practical experience has been collected, which has caused users to take notice of these developments.

The new technology has fundamentally reinventing a process that is as long established as sawing. Reducing the noise level by -10 dB would mean cutting the sound volume in half. An ordinary saw blade running on a woodworking machine at a speed of 6000 rpm produces approximately 100 dB(A) of noise, which is almost as loud as a jet plane.

The 'SuperSilent' is -20 dB quieter and corresponds to a 99% reduction in sound energy and a noise level equivalent to that of a vacuum cleaner.

Two years later, AKE took the unprecedented step of applying this concept to milling tools. The diamond-based 2.0 technology is impressive for grooving, joining and rebating tasks.

'Milling 2.0' means that chips are discharged behind the cutting edge. During machining, this considerably reduces the need to carry out repeated chip cutting and results in a

**3**

noticeably longer tool life.

This is supplemented by further advantages as, in contrast to conventional technology on the market, negative and positive milling cutters are no longer required.

### Functional principle

In general, the feature of Cutting 2.0 that makes it so special is its revolutionary approach to the cutting method. All products – whether circular saw blades, such as those used in the 'SuperSilent', or the recently developed milling cutters for manual and mechanical feed – have one thing in common: the cutting method they use is completely different and promise an increase in tool life while also reducing the risk of injury.

This new cutting principle, with no chip gullet and small teeth make it possible to reduce sound levels (-20 dB) and an extraordinary number of benefits that include:

- Drastic reduction in sharp cutting edges
- Less danger of being injured by cutting edges
- Reduced effort when sawing (15 Newtons)
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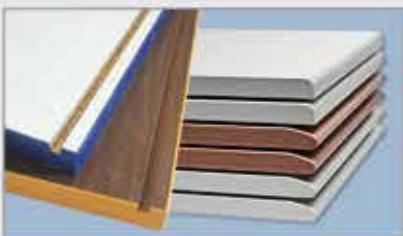


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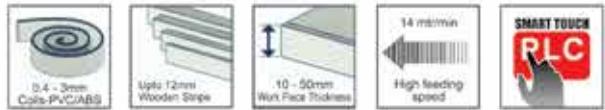
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# New-age wonder from coconuts

Tapping into the abundance of coconut fibre in Andhra Pradesh, an entrepreneur, **Mr. Kusuma Krishna Raj**, makes a fit case for commercial use of indigenous technology



1

**1** Coconut fibre, when treated and engineered, can produce 'coirwood' to meet a wide range of applications and finishes in furniture and interiors.

**By Roy Thomas**

The world is slowly awakening to the dangers of indiscriminate timber exploitation and the realisation that if forests continue to be decimated under the garb of development then it could lead to serious problems such as global warming and irreversible climate change.

Scientists all over the world are now working on developing substitutes for wood to meet the rising demand for alternatives. The United Nations' Food and Agriculture Organisation (FAO) reports that in India there is a large supply-demand gap with consumption of timber estimated at around 40-65 million cubic metres, against the availability of approximately 15 million cubic metres.

The danger here would be illegal felling to meet the shortage and also imports of expensive timber. One of the most promising products touted as an alternative to wood is coirwood, developed by the Central Institute of Coir Technology (CICT) under the aegis of the Coir Board of India.

Coir has a long and hard fibre and is very strong due to its high lignin content (45.84% against 39.84% in teak), and is more resistant than tropical timber against rotting under wet and dry conditions. It is also naturally termite- and borer-proof and is very cost-effective.

## Natural advantage

The wonderful thing about coir is it is easily and cheaply available throughout the year, unlike other agricultural fibres that have been tried out as wood substitutes. The potential availability of coir in the country is around 5 million tonnes annually. Only about 20% of the coconut husk available in India is converted into coir for use in traditional applications. The rest is waste and is usually burnt.

Coirwood or coir composite board is a 100% wood-free material made out of natural fibres such as coir and jute. The fibres are used as raw material with thermosetting adhesive as binder.

IS 15491:2004 is the Indian standard for the product and such coir fibre is processed through needled felt plant (non-woven system) to make uniform mats in densities according to requirement. These mats are impregnated with thermosetting adhesive and pressed into panels under controlled temperature, pressure and time to form medium density fibre(MDF) coir boards.

There are three grades of MDF coir boards as per the Indian standards. Due to its high strength and stable properties such coir boards have a range of uses and can be extensively used in building and furniture making.

The composition of MDF coir boards allows them to be used as an alternative to real wood and it has various beneficial properties, including minimal trim waste, high heat and moisture tolerances, and excellent machining characteristics. More recently, it is also being used for building earthquake-proof shelters in various affected areas.

## Physical properties of coir fibre?

Ultimate length	0.6 mm
Diameter/width	16 micron
Length	6-8 inches
Single fibre	Density 1.4 g/cc
	Tenacity 10 g/tex
Breaking elongation	30%
Moisture regain at 65% RH	10.5%
Swelling in water	5% in diameter

Compressed with adhesive, its surface is very smooth, and facilitates easy application of varnishes, laminates and paints directly to the surface. It is also easily cut, drilled and machined to specific sizes.

### Cheap alternative

MDF coir boards are available in an extensive range of thicknesses, lengths and widths, depending upon the nature of its use. Most importantly coirwood will, on average, cost about Rs. 50 per square foot, while plywood would cost Rs. 90 per square foot. The benefits of coirwood are:

- Coir composites are phenol-bonded boards and have all the properties of phenol-bonded ply, with the added strength of fibre-reinforced phenol bonding;
- The boards are stronger because they are made of fibre known for its strength and load bearing properties;
- It has an attractive natural look and can be used as it is;
- It can be given a smooth, glossy finish on both sides and can be used without surface treatment;
- Boards can also be painted, polished or laminated like any other;
- Low consumption of paint, varnish and glue per square foot;
- Has both vertical and horizontal load bearing strengths and the best compression-to-strength ratios among phenol-bonded boards;
- Coirwood can be form-cut into virtually any shape, with minimum wastage and low labour costs;
- It can also be nailed or screwed and is extremely carpenter-friendly;
- It has a high degree of resistance to surface abrasion and does not flake off dust as in ordinary particle boards
- It resists contraction and expansion due to temperature variations, and does not absorb moisture;
- It is termite- and insect-resistant and has high fire-retardant properties;
- It can be made in all standard board sizes and thicknesses.
- Interior of furniture and cabinets made with coir ply need not be painted or polished, and is virtually maintenance-free.

Coirwood is an innovative product and has



**2|3|4** A coir bale opener (top), resin sprayer and dryer for phenolic resin treatment (middle), a hydraulic hot press (bottom) and a saw to cut the coirwood to required sizes, was some of the machinery that had to be installed.

been successfully test-marketed in India for some years now and the response from the Indian market shows that it has been well accepted as an alternative to plywood.

The coir composite has been standardised under BIS (IS: 14842-2000) and has been approved for use in the Indian Railways, defence establishments, public works and road transport undertakings and state housing agencies. There is also tremendous export potential that is bound to attract consumers in a big way.

There is already enough demand for wood substitutes in Sri Lanka, Bangladesh, some ➤

#### Chemical composition of coir fibre

Water solubles	5.25%
Pectin & related compounds	3.30%
Hemi-cellulose	0.25%
Cellulose	43.44%
Lignin	45.84%
Ash	2.22%



**5** A coir needle felt-sheet, several of which are hot-pressed to make coir boards.

African and South American countries. However, due to strict emission standards in the US, UK and Europe, the product has to be bonded with cashew nut oil.

### Getting started

It is not everyday that you hear of someone giving up a plum government job to venture into the uncertain world of entrepreneurship and business. This is especially true in India, where the maze of rules and regulations can be complicated and extremely daunting.

Mr. Kusuma Raj Krishna worked for 13 years as an economist with a firm that offered water and power consultancy services. He decided to call it quits and set up his dream coirwood project in the state of Andhra Pradesh, at a time when coirwood composite technology was still at a relatively nascent stage.

Although he did not come from a classical business background, KusumaRaj's father had earlier set up a pioneering coir de-fibring plant, which proved to be a huge success, and paved the way for the setting up of many such existing units and other coconut based industries in the state. It also resulted in the creation of several direct and indirect job opportunities for the local people.

Riding on the popularity and the socio-economic benefits that the venture had generated, his father was successfully elected as a Member of Parliament for three terms. Unfortunately, the unit had to be shut down as sufficient time and attention could not be given to it.

"My father's path-breaking venture had always been in the back of my mind and the 13 years of valuable work experience gave me the impetus to set up the venture on my own," Krishna recalls. "East Godavari district, with its large swathes of coconut cultivation, was the ideal location to set up a coir-based unit," he told *WoodNews*.

Krishna's hometown, located close to Amalpuran, is one of the important coconut growing districts in Andhra Pradesh and an ideal location for the plant. The state has more than 1 lakh hectares of land under coconut cultivation and produces nearly 1.5 million nuts annually and coir fibre is abundantly available.

### Fields to factory

The technology for the manufacture of coirwood is patented and so it had to be purchased from the CICT. With the technology came first-hand information regarding the machinery, the production process and more insights into costs, requirement of power, details of vendors, planning of the unit and the range of products that can be made with the coir composite boards.

Although a major portion of the funding was provided by the Andhra State Finance Corporation, Krishna personally had to invest all his savings, take loans from friends and family, and raise capital from private financers to raise the requisite amount. With a total project cost of Rs. 278 lakh, Shriya Enterprises was eventually registered as a proprietorship firm in March 2013.

The machinery was procured from 2M Engineers and Srichakra Engineering, both reputed manufacturers from Peenya Industrial area in Bengaluru. A coir bale opener and non-woven coir needle machines to make coir needle felt-sheet, resin sprayer and dryer for phenolic resin treatment, a hydraulic hot press and a DD saw to cut the coirwood to required sizes, was some of the machinery that had to be installed.

"An all-important visit to a similar existing unit in the Gubbi coir cluster in Karnataka gave me first-hand exposure to the production process and greater familiarity with the production techniques," Krishna recalls.

Regular production commenced in September 2016 and the factory is now seriously working towards winning ISO certification.

### Building markets

Currently the plant is making boards of standard sizes and selling it through local plywood suppliers. It has already received orders for newly constructed housing colonies in Visakhapatnam and Vijayawada. It has also received orders for panelling and partitioning material from Mysuru and for the supply coirwood for construction of houses from Kerala.



6

**6** Shriya Enterprises owner, Mr.Kusuma Krishna Raj (right) with the then Coir Board Secretary.

Local authorities have shown interest in coirwood for use in school and college furniture. The setting up of the new Andhra capital, Amravati, will also present huge opportunities.

Future plans include expansion in to larger markets and metros, first by introducing regular supply in standard sizes, and subsequently through furniture and other products.

Shriya Enterprise reached a turnover of about Rs. 50 lakh in 2015-16 and with increased production and higher operational capacity is confident of touching Rs. 3 crore in the immediate future.

Although he is buoyed by his achievement, Krishna is not a person to rest on his laurels. "There is a lot yet to be done," he states, "The biggest of these is to create an awareness of the material and to bring in the realisation that using such material can go a long way in mitigating the harmful effects of climate change."

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# Superior product and a deserving substitute



1

## Why wood from coconut coir?

The importance of the work we carry out cannot be really explained unless it is viewed against the background of climate change and rapid deforestation that is happening in India. An individual requires the equivalent of three cylinders of oxygen per day that will cost approximately Rs. 700 per cylinder. To produce three cylinders of oxygen we require about seven trees!

**1** The density of coirwood is 1,400 kg/ cubic metre, making it termite- and borer-resistant.

The irony is that by removing trees we are harming ourselves. The seriousness of the damage man is doing by cutting trees can be mitigated to a certain extent by replacing wood with coirwood.

The Central Coir Research Institute (CCRI) in Alappuzha, Kerala, and the Central Institute of Coir Technology (CICT) in Bengaluru, Karnataka, are the two centres where research, product development and diversification, process improvements, identification of new user areas and evolving of eco-friendly technologies are undertaken.

**Mr. R. Vasudev**, Joint Director (Technical), who is spearheading the activities at the Bengaluru centre, tells us more:

## Can you elaborate on 'coirwood'?

It is definitely a superior product to wood in several ways and a deserving substitute. What is more important is that it is sustainable and it is a renewable source of raw material harvested every 45 days. It is also extremely durable and is lingo-cellulosic in nature with a 90% of fibre contains lignin and cellulose.

The density of coirwood is 1400 kg / cubic metre, as opposed to realwood, which is 750 kg/ cubic metre. All this makes coir wood termite- and borer-resistant. It is also compatible with polyester and polypropylene binders that are environment-friendly.

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## Coirwood is better than WPC because it is 80% matter and 20% resin

**– Mr. R. Vasudev, CICT  
Joint Director.**

Coirwood is even better than wood polymer composites (WPC), which is 30% matter and 70% resin. Coirwood is 80% matter and 20% resin. With a thickness that can come down to 0.7 mm coirwood boards can be used on walls and pillars. It can be nailed and screwed and has a life span of nearly 100 years!

### What work gets done at the CICT?

With the advent of coirwood the scope of our research has expanded considerably. We now work on developing pilot machinery and also on setting process parameters like percentage of coir, pressure, temperature, time, etc. Once we develop a new machine-press and coir-feed machinery for example-factories like 2M and Sri Chakra Industries (both from Bengaluru) pick up these designs and start commercial production.

We are also working on developing organic, eco-friendly binders. Thermal insulation is another area that we are focussing on as this material can save power costs by up to 30%.

### What is the 'Gubbi Cluster'?

The Gubbi cluster was set up as a cooperative under a scheme by the Ministry of Small and Medium Enterprises named SFURTI (Scheme of Fund for Regeneration of Traditional Industries) where a 70% grant on machinery and building was extended to participating coirwood businesses.

- 2** Coirwood facilitates easy application of varnishes, laminates and paints. It is also easily cut, drilled and machined to specific sizes.



The participant businesses also had the added advantage of pooling and sharing of several resources and this became an instant success. Based on this, the Government of India has now planned four additional clusters in Karnataka –in Chennapatna, Hassan, Gubbi and Arsikere, which are major coconut growing regions in the state.

Four more such clusters are coming up in Coimbatore, Erode and Madurai in Tamil Nadu and Chettallai in Kerala. Additionally, a sum of Rs. 1 crore each has been sanctioned under a scheme for the rejuvenation, modernisation and technology upgradation of the coir industry.

Some plywood industries in Tumkur, Nanjanagud and Chennapatna in Karnataka are converting from wood to coir, while Maheswari Plywood in Nanjangud is already marketing its coirwood products.

### What financial assistance do you extend to the industry?

The Coir Board currently extends up to 40% subsidy for businesses where the project cost is under Rs. 10 lakh. However, this really restricts the scope of assistance and now a new scheme of across-the-board 25% subsidy on plant and machinery is on the anvil.

The Coir Board is also implementing the Central sector scheme of export market promotion with a view to improving the export performance of Indian coir sector through various promotion activities such as sponsoring delegations, participation in seminars and conferences, organising participation in international fairs and undertaking generic publicity abroad.

### What about coirwood?

More than 115 countries currently import coir and coir products from India. The US tops the list with 26.2% in value and 15.6% in quantity. China is the second largest importer of Indian coir. So far as coirwood goes we plan to participate in various domestic exhibitions – such as IndiaWood next year, and also exhibitions in Indonesia, the US and in Europe – to help create awareness.

The Board expects these initiatives to boost sales from domestic business by over 65% to Rs. 2,000 crore for the current fiscal, with an overall growth of 15%. For more information, email: coirtechnology@gmail.com.

– As told to Roy Thomas

*The Park Hyatt Hadahaa, Maldives - Batutta Restaurant  
featuring timber strips and flooring made of Malaysian timber.*



## Reasons Why Malaysian Timbers are the Preferred Choice!

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- ▶ Renewable
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- ▶ Diverse

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To learn more about Malaysian timbers and timber products, and the Council's 2017 events and programmes, please visit [www.mtc.com.my](http://www.mtc.com.my)



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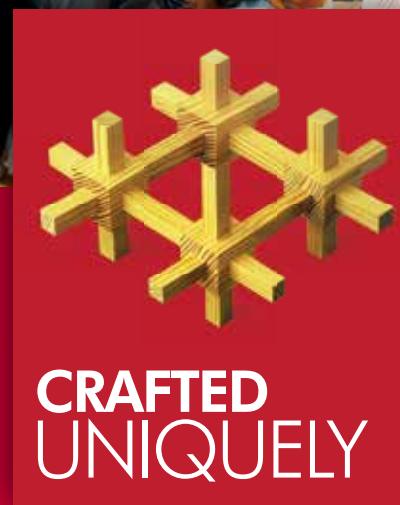
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# All set for new record of visitors

More than 200 exhibitors line up for 12-14 October event at Bombay Exhibition Centre



# Mumbai WOOD

**Display area:**

**8,000  
square metres**

**Exhibitors:**

**200+**

**Expected footfall:**

**10,000  
visitors**

Following two successful editions, MumbaiWood is shaping up to be another success this year. The exhibition will not only significantly increase in size but offers a bigger visitor turnout from across 28 states and Union territories in India.

From 12-14 October, 2017, the industry's biennial event will take over Hall 5 of the Bombay Exhibition Centre, attracting over 10,000 relevant buyers. With very few stands remaining, MumbaiWood is selling out fast.

This year, MumbaiWood is marked by the participation of over 200 exhibitors coming to display and share their latest machines,

products, services, materials and expertise in the woodworking and furniture manufacturing industry.

## Pan-India appeal

There is a mix of new exhibitors as well as returning high-profile brands such as Altendorf, Biesse, Caple Industrial Solutions, Felder, Jai Industries, Kangaro, Kaymo Fasteners, Shree Umiya F-Tech Machines, Wood-Mizer Asia, Shreepal Trade Impex and Michael Weinig.

On the materials side, American Softwoods, Aryamman Interior Solutions, Canadian Wood, Dynasty Modular Furnitures, Gorsan Impex, Malaysian Timber Council, Woodver Coatings, Paramount Composites India, among others, have signed up.

At the end of August 2017 the pre-registration numbers reflected a 70% increase compared to the previous (2015) edition of MumbaiWood. Visitors have registered from 28 states and

206 cities in India two months before the show.

There will be a rush of visitors from Maharashtra, Gujarat, Rajasthan, Punjab, Daman & Diu, Madhya Pradesh, Andhra Pradesh and Telangana. However, keen interest and visitor registration has also been acknowledged from Karnataka, Kerala, Tamil Nadu, Uttar Pradesh, West Bengal, Assam and Bihar.

There are also many registrations from Chhattisgarh, Jammu & Kashmir, Jharkhand, Manipur, Mizoram, Nagaland, Odisha, Tripura and Uttrakhand!

“The market reaction speaks for itself,” says Mr. Sivakumar, Vice-President, PDA Trade Fairs, the organiser of MumbaiWood. It is increasingly emerging as an “unmissable” trade and technology platform for manufacturers and carpenters, as well as architects and real estate developers.

### Media & markets

According to Sivakumar massive investments in hospitality, real estate, tourism, retail and hospital sectors across India have helped the furniture manufacturing industry enjoy a period of steady growth. “This growth has been reflected in our woodworking shows and attracted a diverse selection of exhibitors from India and abroad, all focussed on creating new business opportunities,” he said.

The trade show offers a platform to put technology and material providers in direct contact with manufacturers looking for innovative products, expertise, solutions, distribution networks or industry insights.



**With significantly more exhibitors booked for 2017 and higher visitor registrations, I think we're set for a brilliant event in October.**

**– Mr. Sivakumar, Vice-President,  
PDA Trade Fairs.**

Social media marketing is already having a profound effect on business in general, as well as in the exhibition industry. Going forward it will be one of the continuing underpinning technologies that will drive marketing and business.

“The growth of such social media platforms as Google, Facebook, Twitter and LinkedIn illustrate the acceptance of this type of targeted communication and, more importantly, community building,” notes SivaKumar. “Each of these platforms embodies its own community with its own social structure.”

Exhibitors can follow PDA Trade Fairs social media and post on its wall, telling buyers what they are exhibiting at MumbaiWood:

Facebook: @mumbaiwood2017

Twitter: @mumbaiwood2017

LinkedIn: Indiawood

About 83% of the most successful companies at events are the ones that spend time communicating with their prospects and customers before the show. As an exhibitor at MumbaiWood, exhibitors are offered a range of the most effective marketing options that will drive visitors to their stands, generate sales leads and maximise returns on objective.

For details connect with Mr. Pradeep Kumar at [g.pradeep@pdatradefairs.com](mailto:g.pradeep@pdatradefairs.com).



# Hot-melt adhesives for edge banding



Modern adhesive systems are an essential requirement of the wood and furniture industry, and it requires many years of expertise to come up with appropriate solutions, some of which are often customised.

Jodhpur-based Surfactant Industries are pioneers in the field with over two decades of expertise. Using German know-how, they

have developed 'Starke' unique D3 wood glue with high water resistance.

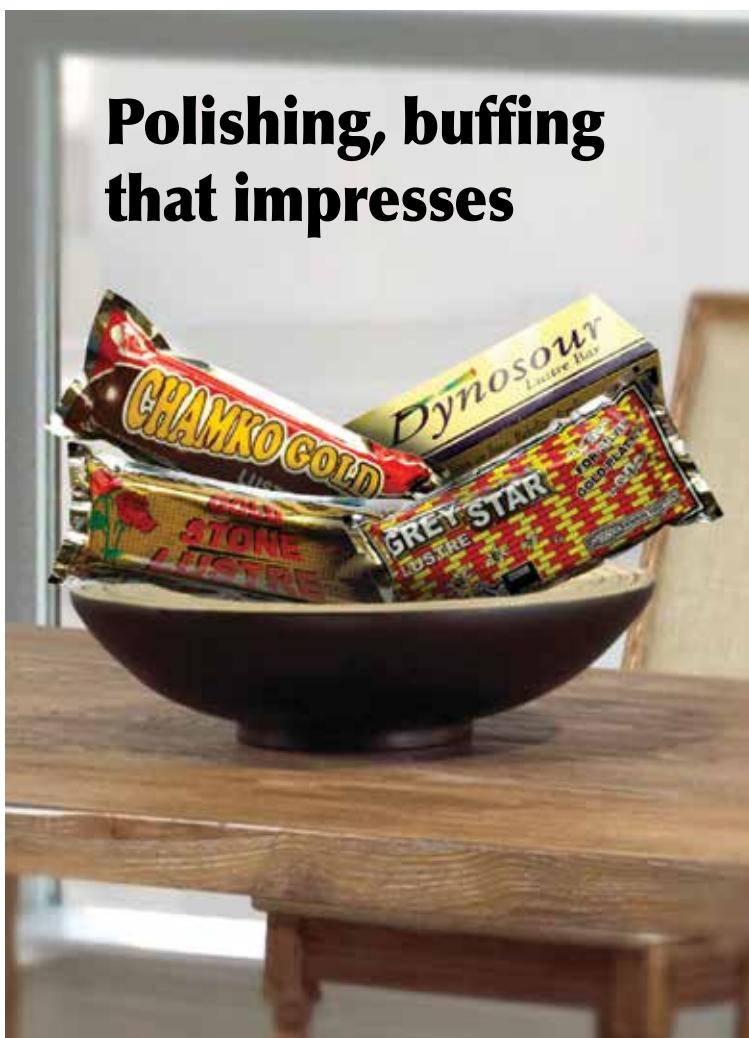
Keeping up with the upcoming demand of improved material, it has also introduced two grades of hot-melt adhesives: SI-7090M and SI-5050A. These adhesives are specially formulated for various types of edge banding material and edge banders used for making kitchen and bathroom cabinets, office furniture, store fixtures etc.

The SI-7090M is an edge banding hot-melt adhesive designed for a manual edge banding application. It has a low application temperature of between 130–150°C.

The SI-5050A is an edge banding hot-melt adhesive designed for automatic machines. The application temperature here is 190–210°C.

Both adhesives are available in 25-kg paper bags.

## Polishing, buffing that impresses



There are various essential inputs that go into the production of woodlamination. For cutting and polishing on wood, gold or gold stone lustre, grey star lustre, final finish on wood, lustre bar and white diamond lustre are some of the materials required.

Dynosour International are producers of a range of metal polishing and buffing compounds that provide impeccable finish to metal, plastics, wood, Bakelite, acrylic, celluloid and other material. All its products are offered in standard as well as customised configurations.

For wood lamination the company manufactures and supplies Chamko Gold and Gold Stone lustre, export quality Grey Star lustre. For final finishing on wood, it sells Dynosour lustre bar and export quality Dolphin white diamond lustre.

The company, set up in 1964 in Ghaziabad (Uttar Pradesh), is equipped with latest machinery that produces quality products. It has a top notch team that ensures that established quality standards are constantly maintained.

Backed by a well equipped research and development unit which is managed by a team of experts, the company regularly introduces new technologies to meet market demands.



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## Canadian timber spawns fresh interest in structural applications

**1** Pre-fabricated homes are a rising trend in the second home and tourism sector.

In India wood frame construction is unusual. There are examples of timber trusses and post-and-beam construction in old buildings, but these days concrete and steel is the norm.

There is a form of timber construction termed "pre-fab" in India, which refers to a tongue-and-groove interlocking style of construction, where the individual boards are profiled and notched in a factory, delivered to the site and assembled a board at a time. This method utilizes Canadian Spruce-Pine-Fir (SPF) for the most part.

In North America, Europe and the Oceania, pre-fab can mean factory made, where roof trusses and wall frames are made before being delivered to the site, or it can mean the components are factory made and everything is assembled on site using nail-gun.

**2** Stud wall framing in Canadian SPF with seven layers of insulation, at DelhiWood 2017.

In India wood frame construction is unusual. There are examples of timber trusses and post-and-beam construction in old buildings, but these days concrete and steel is the norm.

In North America, Europe and the Oceania, pre-fab can mean factory made, where roof trusses and wall frames are made before being delivered to the site, or it can mean the components are factory made and everything is assembled on site using nail-gun.

There are also a few examples of light wood-frame construction, which refers to a combination of timber stud wall and timber roof trusses, pre-fabricated in part or in whole in a factory.

Pre-fabricated light timber framing is typically erected on a concrete slab or on a timber deck where the site is sloping. Stud walls can accommodate services such as electrical and plumbing and insulation before inner and outer walls are added. Outer walls can be wood or non-wood.

### Fresh opportunities

Post-and-beam is a traditional building style requiring larger sections of timbers and has been used in India in the past. With the cessation of logging and preservation of India's old growth forests there are opportunities to re-introduce this style using Canadian species which are available in large sections, long lengths and are of structural grades.

There is also a great deal of interest from architects and designers who want to stay ahead of the curve with glue- and cross-laminated timber, called glulam and CLT respectively.

Glulam is a type of structural engineered wood product comprising a number of layers of dimensioned lumber bonded together with

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4

- 4 Engineered glulam beams in Douglas-Fir.** durable, moisture-resistant structural adhesives. In North America the material providing the lamination is termed laminating stock or lamstock.

CLT is a wood panel product made from solid-sawn lumber. Each layer of board is orientated perpendicular to adjacent layers and glued on the wide faces of each board, usually in a symmetric way so that the outer layers have the same orientation.

An odd number of layers is most common, but there are configurations with even numbers as well, which are then arranged to give a symmetric configuration. The cross-gluing allows using the panels with two span directions whereby some differences in stiffness and strength are observed along the two directions.

Other Canadian wood species of Western Hemlock, Douglas-Fir, Western Red Cedar and Yellow Cedar continue to showcase their usage across other applications of solid wood furniture, door frames, wooden doors, internal frames for flush doors, panelling, cladding and other outdoor and specialty projects.

*For further information write to [info@canadianwood.in](mailto:info@canadianwood.in).*

## OpuLux now gets Supermatt finish



Maintaining its technical leadership in new product development, Prestige Inteio Concepts is launching its premium OpuLux in Supermatt finish, the first supermatt finish produced in India using European acrylic laminates.

Unlike the foil or lacquer-based Supermatt finishes which are available only on MDF, OpuLux Supermatt will be available on a host of core materials like plywood, MDF and Birch plywood. Discerning customers will have the

option to choose the right core for their specific requirement.

The laminates used to produce OpuLux Supermatt panels are made by the latest co-extrusion technology with lacquer coating. This lacquer coating provides the surface of the OpuLux Supermatt panels with an extremely high scratch resistance.

OpuLux Supermatt panels have a soft, smooth, and velvety touch. A palette of four pastel colours are a soothing treat for the eyes. Anti-fingerprint properties of the OpuLux Supermatt panels makes it the perfect choice for high usage area such as wardrobes and kitchen shutters, and even horizontal surfaces like table tops.

With a gloss level of less than 6%, OpuLux Supermatt can be paired with OpuLux scratch-proof High-Gloss to provide a perfect complementary balance of Supermatt and high gloss finishes to produce exclusive contemporary furniture.

OpuLux Supermatt has a host of applications: from exquisite kitchen and wardrobe shutters to living room units, coffee and dining table tops, office and store fixtures, as well as hospitality furniture.



## Akron 1400

Automatic single-sided edgebanding machines

### Invisible Edgebanding

The Akron 1400 is a range of single-sided edgebanding machines for the application of edging in either rolls or strips. Compact working units designed to simplify the preparation operations are available with various configurations to suit specific production requirements.

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 **BIESSE**

# Display space: going, going, gone!

From March 8-12, 2018, India's leading furniture technology fair in Bengaluru will expand exhibitor and visitor profiles



Exhibition space for the 10th edition of IndiaWood (March 8-12, at the Bangalore International Exhibition Centre) is expected to be sold out by October this year, despite the addition of a hall (signifying a 25% increase over the 2016 event).

This is happening as a result of overwhelming response from both the machinery and materials sides of the supply chain, according to Mr. Sivakumar, Vice-President, PDA Trade Fairs. He added that, if required, the show would have to be expanded even further!

Sivakumar said three more segments are being added to IndiaWood 2018: wood-plastic composites (WPC), bedding and reclining systems (for sofas and beds).

PDA Trade Fairs, the organiser of IndiaWood, has already announced that the new layout will now have four halls, an exclusive area for outdoor display, and three huge registration

areas for visitors to ease the registration process.

With over 50,000 square metres on hand, the organiser expects to cover every facet of woodworking and furniture production, making IndiaWood a must-go-to trade show, with all great business opportunities under one roof.

Germany, China, Italy, France, Turkey, Taiwan, Canada, Malaysia, Russia, Sweden, Brazil and the USA will participate under their country pavilions. There will be representations also from Nepal, Sri Lanka, Bangladesh, Myanmar, Bhutan, Thailand, Indonesia and the Philippines.

Through proactive engagement with stakeholders and a genuine commitment to excellence, IndiaWood has evolved in line with industry demand, and is globally recognised for doing so. Exhibitors continue

## IndiaWood 2018 Highlights

- 50,000 square metres exhibition space
  - More than 850 exhibitors
  - 12 country pavilions
  - 65,000-plus industry visitors
  - Over 200 media representatives

to value the strength of IndiaWood 2018 as a strategic platform, and will be showcasing the latest technology and innovations that are currently shaping modern furniture production.

## Additional events

This time around, the organisers are planning a ‘Timber Council’ during the 5-day event to highlight various scientific aspects, resources and availability, and trends in various furniture markets.

Besides, there will be product and technique demonstrations of over 500 woodworking machines; the popular 'Sourcing Forum' to help manufacturer-supplier interaction to exploit potential business opportunities.

There will be special activities to attract architects, interior designers and builders, to help them understand the complete supply chain. So far as carpenters are concerned, there will be live demonstrations of machinery, power tools and joinery, besides recognition to those with experience and talent.

More than 65,000 craftsmen, woodworkers and furniture manufacturers; distributors, dealers and manufacturers of hardware and accessories; plywood and particle board manufacturers and traders; manufacturers of wood-based products; architects, interior designers and builders; and the entire woodworking ecosystem from all over India and South-East Asian and South Asian countries is once again looking forward to IndiaWood 2018.

As the leading platform for this sector, IndiaWood gives buyers a complete overview of the market in all its dimensions. It is seen as a driving force behind innovation and success in the solid wood and panel-based furniture production industry in the country. IndiaWood has consistently set the pace for the next two years.

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# Kal, Aaj aur Kal scenarios



Often clouded by doubts and individual perceptions, the rollout of GST last month must be seen as a progressive step, insists **Mr. Pankaj Chandak**. A former banker in the US, he is now MD and CEO of Mumbai-based pre-laminated boards manufacturing company, Prestige Interio Concepts Pvt. Ltd.

The memory is still vivid. The year was 1999. I was working with a major investment bank in Manhattan, New York. Experts were predicting a gloom and doom scenario. Why?

The computer systems which were designed earlier were not programmed to accommodate the millennium change – the infamous 'Y2K' problem! Experts had predicted that come 1st January 2000 and the world would come to a standstill – which, of course, would have been disastrous for the global economy.

1st January 2000 came almost 18 years ago, and all of us have survived the scare, and thrived!

Fast forward to June 2017, and I am now working in a panel manufacturing company. Business has come to a standstill. Why?

Come 1st July 2017 and the Goods and Services Tax (GST) will come into effect. Hell will befall the Indian economy because its businesses are not geared for it. Naysayers predict that it is very complicated.

1st July 2017 came, yet businesses survived the catastrophic prophecies about the evils of GST. Businesses will not only survive the so-called "onslaught" of GST, I believe businesses will thrive because of it. Let's see how:

## Tax arbitrage

Earlier, if a supplier and buyer were located in different states, the supplier was at a disadvantage compared to suppliers located in the same state because inter-state sale transactions used to attract 2% CST, for which there was no input credit available to the buyer. In other words, this was an additional 2% cost for the buyer.

In addition to this 2% CST there was administrative burden on both the buyer and the seller to provide and receive the 'C' Form respectively. Now, with a uniform GST rate for a particular product or service across the country, there's a level playing field and a fair and competitive landscape between all the participants, because there is no differential tax rate for the product irrespective of the geographical location of the transacting entities involved.

## No 'C' Forms

Probably the biggest advantage of GST is that businesses do not have to worry about issuing or receiving 'C' Forms for inter-state transactions. 'C' Forms were a huge administrative and financial burden on both the buyers and the sellers located in different states.



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Now, with GST in effect, there is no requirement for businesses to submit 'C' Forms to their local sales tax authorities to prove that they have made an inter-state sales. The psychological relief experienced by the businesses because of the termination of this regulatory requirement is extremely palpable.

#### Expenses credited

Before 1st July this year, no VAT (value added tax) credit could be claimed by the buyer of the goods or services, which were ancillary to

**With data analytics it is possible for the taxman to trace the raw material at the beginning of the value chain.  
Discrepancies would attract huge penalties.**



**– Mr. Pankaj Chandak, MD & CEO,  
Prestige Interio Concepts Pvt. Ltd.**

the main business activity. For example, a manufacturer could not claim the input VAT credit for stationery and printing items.

However, in the GST regime the buyer can

claim full credit for the GST paid to procure any goods or services. This is a monumental change because it will have a substantial positive impact in reducing the overall expenses of all manufacturers.

This, in turn, will help improve the profitability of the company and – if you see the larger picture – boost economic growth.

#### Transparent pricing

Excise, CST, VAT, octroi, entry tax, etc. were some of the taxes or levies which were charged on the basic price of an item or service. Some of these taxes were charged at the manufacturer's level and some were charged on the incremental value addition during the transition of the product from the manufacturer to distributor to the final consumer.

Thus, the pricing of the product was opaque and artificially high because of the different tax components. Now, with a single GST prevalent across the entire value chain of the product, the pricing of an item is extremely transparent.

In effect, the rate of taxation is actually reduced because of the lack of duplicity in taxation across different jurisdictions.

Now, let us talk about the impact of GST on business. Earlier, if the manufacturer was registered as an excise payee and was located in a different state from the end consumer, there was an impact of 14.75% (12.5% excise on basic price and 2% CST on basic price and excise) on the price of the goods sold to the consumer, because the manufacturer couldn't claim excise and CST credit.



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With GST, irrespective of what slab of taxation the product falls into, the customer can claim complete input credit for the entire GST amount paid to the supplier. Thus, the final price of the product being sold to the consumer will be reduced because of the input credit chain. This will be extremely beneficial for the overall growth of the industry and thus economy.

### Working capital

During pre-GST days, businesses had to file and pay excise duty (if they were registered under excise) and sales tax on a monthly or quarterly basis, based on their commercial size. The net outflow in this scenario, after accounting for input credits for excise and VAT, was not substantial.



Under GST – because of consolidation of all the taxes under one umbrella and with a uniform monthly frequency of filing GST returns – it would impact the cash flow requirements of the company. Let us illustrate this impact with the case of a manufacturer which imports some raw material.

In pre-GST days, if a buyer was importing a product that attracted 10% customs duty, 12.5% countervailing duty (CVD), 4% special additional duty (SAD), 2% educational cess and 1% secondary educational cess, the total payment that this importer had to make to clear the shipment was 30% of the basic freight on board (FOB) price of the material – in addition to the clearing and forwarding charges.

In the GST era (assuming the clearing and forwarding charges remain the same), when the same buyer imports the same material, he/she has to pay 10% basic customs duty, 28% integrated GST, 2% education cess and 1% secondary education cess: a total of 41% to the government to clear the same goods.

In other words, an additional 11% capital has to be shelled out to purchase the same

material. This doesn't mean that the cost of the material has gone up by 11%; it just means that the cash outflow has increased by 11%.

Let us assume that this manufacturer produces a product using this material and sells it to his/her customer located in a different state at 28% GST. Earlier, the same sales transaction would have attracted 12.5% excise and 2% CST (for inter-state transactions), a total of 14.75% of the sale price.

### Cash outflow

In the GST regime the cash outflow on sales has increased by  $28\% - 14.75\% = 13.25\%$ . Although the input credit will be used to offset the output GST, there would still be a new outflow because of the GST charged on the increased value-added price.

*Prima facie* it seems that this increase in cash outflows will cause tightness in money rotation or investments of new funds, till such time as the cycle smoothes out.

However, industry believes that this should introduce fiscal prudence and discipline in the conduct of business. A timely rotation of cash would positively impact the overall growth of the industry.

### Correct invoicing

A widespread malaise in the consumer-facing sector of the industry was the prevalence of under-invoicing of goods. With a completely system-driven implementation of GST access to the right information would be very easy for tax authorities.

With incredible technological developments in the science of data analytics, it is possible for the tax authorities to trace and tag the finished product to the raw material used at the beginning of the value chain. Further, there will be random checks of goods in transit to check at what price the material is being invoiced.

If any discrepancies are found during such analysis and random audits (between the price mentioned on the invoice and the realistic price of the same material), the resultant penalties would be huge.

### Tracking compliance

In pre-GST days, manufacturers had to wait for Sales Tax assessments to find if the supplier who charged VAT on the sales had paid VAT to the government or not. There was a substantial time delay between the time of the invoicing, the time when the buyer used to claim the input credit in his/her VAT returns, and the time when the buyer was informed of the missing VAT amount provided by the seller.

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This delay used to result in high administrative costs and was a frustrating experience for the parties to resolve. In GST, this problem has been fixed. All GST-registered buyers would be able to see online every month whether the seller of the goods or services has filed his/her GST returns.

If there are habitual omissions or mismatches between the GST amount that the seller has charged from the buyer and paid to the government, then the purchaser would be hesitant in doing consistent business with such a supplier as the buyers would not be able to claim input credit for GST paid. It would also result in an increased cost for the buyers.

Therefore, the buyers would be hesitant in doing new transactions with such sellers. This pressure of losing business would force the sellers to adopt robust business practices and systems, and to be more systematic and ethical in their dealings.

**All businesses should be registered under the new regime and the onus of collecting GST should be on the provider of goods or services, without exception.**

#### Organised industry

Organised participants are the companies who follow a process and have a system for executing business processes, whereas unorganised companies are the ones where business processes are executed on an ad-hoc basis. The size of the company doesn't play any role in the company being organised or not.

Implementation of GST would compel all companies to follow certain best business processes and practices. This would result in heralding professionalism in doing business.

It must be borne in mind that a major reform like GST in a politically, economically, and culturally heterogeneous country like India cannot be implemented without compromises.

However, given the current momentum of reforms in the country, I believe it is not wrong to expect the following enhancements in GST 2.0:

#### Single structure

In theory, although GST is a single tax across the country, because of political balancing, this single tax has been split into three: IGST, Central GST and State GST. The system of credit matching between these three different GST components is a cumbersome process.

Having a single GST, where a business entity doesn't have to worry about the inter-state, central, or state government components, would ease the process of GST compliance.

#### Tax rates

As is prevalent in almost all countries where GST is in force, there is one GST rate for all products and services. Again, because of political compulsions, a multi-tier GST structure has been implemented in India. I hope that these measures are pit stops towards a single type and single rate GST structure.

HSN/SAC codes are being used in the current implementation of GST to ensure that proper GST rates are being levied on the goods and services being transacted. However, if we move towards a single rate GST, there will be no requirement for these codes. This will reduce the administrative burden on all businesses.

#### Reverse charge

As of now there are multiple categories in GST: registered dealers, unregistered dealers and composite schemes. There are some entities – for instance transport services who are either registered or unregistered under GST – will not charge GST amount on their services. In such scenarios, the purchaser of the service is liable to calculate and pay the GST on his/her own.

This is known as reverse charge mechanism. Such entries are often ambiguous and are not easy to track and implement unless detected by an auditor. Ideally, all businesses should be registered under GST and the onus of collecting GST should be on the provider of goods or services, without exception.

*Kal* (yesterday) was cumbersome, *Aaj* (today) is an improvement and *Kal* (tomorrow) is loaded with hope. The real success of GST will be when each one of us wonders how business could have ever been conducted without GST!

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# 'Boost for buying machinery'



Woodworking machinery, including imported brands, is set to get cheaper following the migration of businesses to the GST regime. Moreover, it will provide a level playing field for the organised and unorganised sectors of India's furniture manufacturing industry and trading community.

This is the view of Mr. T. Gopi, Managing Director of Bengaluru-based WoodTech Consultants, which not only manufactures machinery locally but also represents nearly a dozen reputed brands from across the world.

**Post GST, machinery cost is down by about 9%**

He told *WoodNews* that, post GST, machinery cost is down by about 9%. Machinery manufacturers and suppliers would have to pass on the benefit to the buyers. "The cost of capital expenditure going down is good for the growth of the furniture manufacturing industry," he said.

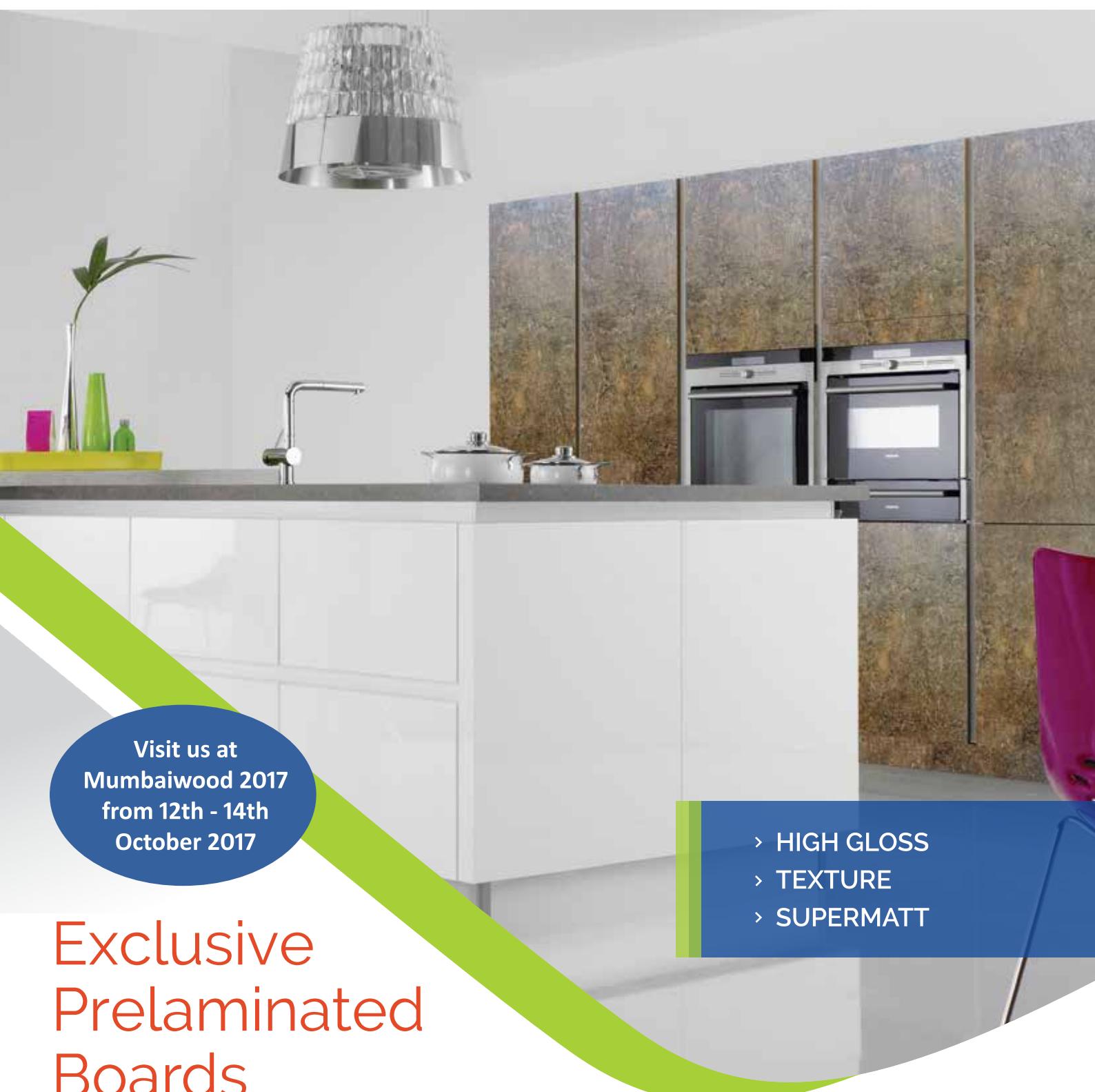
Earlier, machinery imports attracted about 24% tax (7.5% customs duty, 12.5% CVD, 4% SAT), which has been replaced by the 18%

slab. "Since sellers will get credit inputs, their costs will go down further, which they should pass on to the buyers," Gopi noted.

The 28% tax slab for plywood, fibre boards and wood panels looks big on paper, especially for the unorganised sector. But Gopi points out that before GST came into effect, it was 14.5% VAT and 12.5% excise (totalling 27%). He argues that the unorganised sector must come on board the GST regime to benefit from tax credits, ease of logistics and reduced inputs costs to stay competitive in the market.

However, he agrees that lower tax slabs would have ensured better compliance and greater consumption. He agrees that the 28% rate for plywood, fibre boards and wood-based panels is on the higher side, especially because it would affect agro-forestry indirectly. "But if proper representation is made to the GST Council, there is a chance that the rates may be revised in the years to come," he added.

His advice to the industry? End tax dodging and under-invoicing because the chances of getting caught are very high, on account of the entire value chain of each product turning GST-compliant. "It is best to keep your records straight. This is the best example of ease of doing business, and the perfect opportunity to enter a fair and competitive environment."



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1

# Clients' factories are Kleiberit's laboratories

To what does adhesives and hot-coatings supplier, Kleiberit, attribute its leadership position in markets worldwide? *WoodNews* recently posed this question to **Mr. Wolfgang Hormuth**, Global Vice-President for Kleiberit's adhesives business, who also heads its Technology Centre in Weingarten, Germany. Excerpts:

**1** Kleiberit works with machinery manufacturers worldwide, including some in India, to help with their challenges and address new ideas.

## What goes into planning and producing a top-quality product?

Any product in the furniture market has to stand the test of good design and its application. Its material, its production process and its finishing are equally important.

## How does Kleiberit help its clients achieve this?

We are not just suppliers of adhesives and coatings; we believe in extensive research and development in collaboration with our clients worldwide. If a client comes to us with a challenge or a problem – even a new idea – we ensure he doesn't return without a viable solution and a satisfactory answer.

## What is so unique about Kleiberit in the global market?

Foremost is the fact that Kleiberit has forged

one of the global leadership positions so far as its knowledge of PUR coating and its processes is concerned. This is not our marketing spiel – our clients have recognised us as “innovators” in this field.

Second, Kleiberit believes that business and growth can be sustainable only if you strive to continuously provide solutions to the challenges faced by various markets.

## Could you elaborate on the second point?

We have our sales engineers worldwide who are constantly clued in to our clients' requirements and the changing trends in various markets. These engineers work in close association with them, assisting in supervision of production, educating operators, advising management and addressing real-time problems. They work with the client's material in their production facilities.



“

**Our entire technical staff in Weingarten facility worked in the simulated heat and humidity of India, whereas outside it was -10 degrees Centigrade!**

**– Wolfgang Hormuth,  
Global Vice-President,  
Kleiberit Adhesives Business.**

of his proposed product for testing and approval; and we reverted to him with our solutions even before his machinery was commissioned.

In another instance, testing of some samples from an Indian client had to be completed at the height of winter in Germany. The entire technical staff in our Weingarten facility worked in summer clothing in the simulated heat and humidity, whereas outside the facility in Germany it was -10 degrees Centigrade!

#### **How has the Indian furniture industry changed?**

Since they are trained, they understand the products and materials, the technology required for production and the client's competence, and can foresee any complications that may arise. They are also good communicators and are an important link between the market and our product teams and scientists. In fact, they have always been the basis of Kleiberit's growth.

#### **You have a long association with the Indian furniture industry. What has been Kleiberit's experience here?**

All our engineering is done on-site; only very fundamental changes are referred to Kleiberit's Technology Centre in Weingarten. There were some production challenges here, mainly on account of high temperature and humidity in the production environment. But Kleiberit has always come up with solutions.

I remember one Indian client had sent samples

Earlier, expensive machinery was installed and commissioned; but the expectations of product quality were often belied. That is where Kleiberit has been different – we impressed upon the new generation of Indian clients the need to work with domain experts (such as Kleiberit) to successfully see a project through, from conception to production.

In one case recently, Kleiberit engineers were at hand during installation and commissioning of a flat-lamination line until full-fledged production was achieved, to ensure that the output was up to the standard the client expected. You'll never lose anything if you involve suppliers of consumables in planning your new products and factory.

Especially with new products – as has been the case of a hot coating line commissioned with Kleiberit products in India recently – it is a good idea to connect with experts like ▶

Kleiberit to test the product in advance, plan and adopt relevant technology and production processes, test samples and then commence production.

#### **What are the trends in the Indian market?**

Although profile-wrapping (using a variety of substrates) is still in its nascent stage in India, I see it as the biggest area of growth in the years to come.

#### **Tell us something about your R&D facility and Technology Centre in Weingarten (Germany).**

Both these facilities employ huge teams of top-of-the-line scientists and technical experts from across the world. Visitors are welcomed with an open mind and warm feelings, because we see them as collaborators in seeking solutions and spawning innovation.

We have experts in adhesives, edge banding, flat lamination, top coating and profile wrapping. And our visitors – including potential clients – come from all habitable continents of the world!

The Technology Centre is no small feat: we have equipped it with machinery that can churn out industrial-scale production for testing, sampling and quality assurance. In it we have a full-fledged flat-lamination line, edge banding machines that can work with various materials, hot-coating machines and a profile-wrapping line that can work on different substrates.

In fact, clients sometimes send us their samples by the truckload for testing, problem-solving and further development!

- 2 Profile-wrapping will be the biggest area of growth in India in the years to come.

#### **Kleiberit's production facilities are limited to Germany. How do you service geographically distant and diverse markets?**

Only 15% of our products are sold within Germany with the remaining 85% being exports to the rest of Europe, clients in North and South Americas, and all of Asia and Australia. We have an extensive in-house network of trained sales engineers that not only connects with our clients but also gives feedback on markets.

#### **Kleiberit has a long history of collaboration with (woodworking) machinery manufacturers too...**

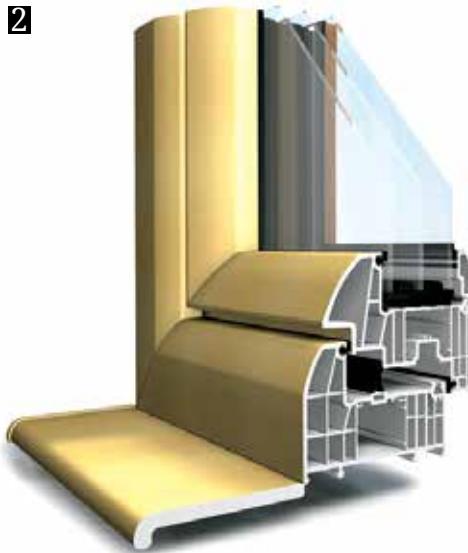
We develop products for furniture manufacturers, who are our clients. But a large part of our research has always been dedicated to meeting challenges and addressing new ideas that machinery manufacturers throw at our team of scientists. It has resulted in these technology providers winning international awards, helped them increase their business and earn positions as market leaders.

#### **What would you like to tell readers of WoodNews?**

Kleiberit would want the Indian market to benefit from our expertise and our spirit of collaboration with the industry. I would also want to welcome Indian manufacturers and potential entrepreneurs in the furniture industry to visit Kleiberit's Technology Centre in Weingarten!

In the meantime, you can get an impression of our company under [www.kleiberit.com](http://www.kleiberit.com).

2



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# EU timber retail giants join hands

An alliance of European home improvement retailers has become a dynamic force for legal and sustainable timber sourcing, reports international timber and forestry sector journalist, **Mike Jeffree**.



1 B&Q home improvement stores are part of TRC founder, the Kingfisher Group.

Members of the Timber Retail Coalition (TRC) are among the biggest names in European timber and wood products consumer markets. In fact between them Kingfisher Group, Ikea, Carrefour and Marks & Spencer add up to 14,000 stores on five continents and their combined sales, across all product sectors, top €100 billion. That's a sizeable share of European retail spending.

The ultimate aim of the alliance is 100% sustainable wood sourcing. However, they regard ensuring timber legality as a crucial step en route. Consequently they strongly supported implementation of the EU Timber Regulation (EUTR).

They also now welcome the arrival in Europe from Indonesia of the first timber and wood

products licensed under the EU Forest Law Enforcement Governance and Trade initiative (FLEGT).

The initiative to launch the TRC came in 2010 from Kingfisher, which includes DIY and home improvement chains B&Q, Castorama, Brico Depot and Koctas. But the other members were quickly on board.

Each of the four businesses was already known for its commitment to responsible wood procurement and all-round environmental performance. Individually they also wielded significant market influence. But working in concert, they felt, they could steer timber and wood product supply, sourcing and consumption trends even more effectively.

## Climate change

As part of its strategy, the TRC also decided to focus on broader forest related issues. These include deforestation, its impact on climate change and potential contributory factors to it, including manufacture of palm oil, leather, beef and soya-based goods.

"We engage on these issues with all levels of EU government and relevant non-government organisations to ensure timber regulation and policies are effective and workable," said a TRC representative.

It followed that TRC members were among the first and most prominent private sector advocates of the anti-illegality EUTR. "We felt workable regulation would send a clear message to suppliers and producers that illegally harvested timber was just not acceptable," the TRC said, and called for the new rules to be based on due diligence – to 'build on voluntary measures to which our members are already committed'.

In addition they saw the EUTR creating a level playing field for the bona fide timber sector. It meant all EU businesses and governments would follow the same legality assurance rules and meet the same standards, so no one would be at a competitive disadvantage.

## Work in progress

While its members already operated supply chain due diligence systems before the EUTR came into force in 2013, the TRC maintains it has also helped reinforce them, particularly in terms of the improved quality of supplier data and information it delivers.

Although recognising its successes to date, the TRC still see some aspects of the EUTR as work in progress. Primarily they want it even more

strictly and uniformly implemented in all EU states, so that it ensures their desired level legality playing field and a "fair operating environment that does not punish businesses sourcing responsibly".

Other items on the TRC's wish list include giving third-party sustainability certification, notably FSC and PEFC, added weight as proof of EUTR due diligence. They also advocate a review of the product categories it covers.

Turning to the FLEGT VPA initiative and FLEGT licensing, the TRC sees them as an indirect means of achieving further due diligence for specific supplier countries. By pushing legality assurance back to the authorities in supplier countries, it "effectively operationalises the due diligence process for EU operator-importers".

It's up to each TRC member whether it steers suppliers towards FLEGT-licensed goods. But they would like to see Indonesia's licensing start give added impetus to other countries engaged in the FLEGT VPA initiative to reach the same point.

The TRC also believes these forestry and timber issues can only assume ever greater significance for them and the wider business community in the future. "The WWF's Living Forest report suggests that global timber demand could triple by the year 2050. This could generate severe economic, environmental and social costs, which means an even greater and more urgent need to manage the forests and timber supply chain in a legal and sustainable way," said the TRC spokesperson.

*– The writer is Communications Consultant with the Global Timber Forum. He may be contacted at [mjeffree1@gmail.com](mailto:mjeffree1@gmail.com).*

2



2

Customers for timber and wood products want to know they're legal and sustainably sourced.



# Wood coatings markets expand

*Picture courtesy: European Coatings.*

There are upbeat forecasts for housing and residential construction activities across the globe, and increasing levels of urbanisation in particular are boosting demand

Compared with the global coatings market, which last year had a value of 125 billion Euros and a volume of over 40 billion litres, wood coatings are small fry. The market research company, Orr & Boss, estimates that they represent only about 7% by both value and volume.

That would make their contribution worth 8.6 billion Euros and imply a volume of around 2.6 billion litres. Prognostications about how the market will develop vary from study to study.

However, in view of the increasing levels of urbanisation in many parts of the world and the recovery in housing and residential

construction activity, the prospects for the future look good.

Markets and Markets (MaM), another market research company, estimated the size of the market in 2016 at almost 9.95 billion Euros. The company based this figure on demand for wood coating resins which it assessed as being worth 2.98 billion Euros. Given that resins account for about 30% of the value of a typical wood coating, this translates to a value of almost 10 billion Euros.

MaM expects the market for these resins to grow at a compounded annual growth rate of 5.4% through to 2021, by which estimate the resins market would then be worth 3.83

billion Euros. Applying the same figure of 30%, the wood coatings market would then be worth about 12.6 billion Euros.

### **Biggest market**

The Asia-Pacific region is and will remain the largest market by value and volume. Regionally, the coatings market for wood mirrors the entire coatings sector. By far the largest, and therefore the most important market, for wood coating is Asia-Pacific.

Market research companies are relatively unanimous in this respect, attributing 60% of the global wood coatings market to this region. Taking the figures proffered by Orr & Boss as the basis, the 5.25 billion Euros account for 61% of the total value of wood coatings, with the almost 1.7 billion litres corresponding to 65% of the total volume.

Cautious estimates suggest that annual growth in this region will be about 13% by volume and just under 15% by value in the years ahead. Europe and America follow in second and third places.

### **Market domination**

The majority of all coatings for wood continue to be solvent-borne. Market researchers are relatively unanimous here, estimating the solvent-borne fraction at 70% of the total volume.

Conventional solvent-borne systems lead the rankings with over 40%. High-solids solvent-borne paints account for a good 25%. Water-borne systems and radiation-curable coatings together make up almost 30%. There will be little change in this breakdown in the coming years.

There will be marginal changes in favour of water-borne and UV systems as a result of a shift towards more eco-friendly products. This is a process which is mostly evident in Europe and North America, as these regions have a higher proportion of eco-friendly paint systems than Asia-Pacific.

However, given that the latter is the largest in terms of wood coatings, the share of solvent-borne systems has the greater impact on the overall market. The full report can be found in the July-August issue of the European Coatings Journal. The report offers an extensive package on wood coatings, product overviews, expert interviews and technical papers.

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# In South Africa, something to mull over

All American hardwood used to make the seven pieces can be replaced naturally in US forests in under 2 seconds



1

**1** Designer Laurie Wiid van Heerden's 'Meraki Daybed' is made using cork and American soft Maple.

The shape and concept for the head rest is derived from research based on the Senufo people of West Africa. Cork is also used as an alternative to upholstery.

The American Hardwood Export Council (AHEC) has unveiled its 'Seed-to-Seat' furniture collaborative at '100% Design South Africa', the African continent's premier exhibition and sourcing platform for high-end contemporary design (August 9-13) in Johannesburg.

Given an open brief and asked to design 'something to sit on', the designers have created seven unique pieces using American Tulipwood, red Oak, soft Maple and Cherry, which are lesser known American hardwood species in South Africa.

The seven seats, which have been designed and made by some of the most prominent and exciting designers based in South Africa, were on show in a creative display that highlighted the sustainable credentials of the American hardwood resource.

Aiming to demonstrate that sustainability can have substance, AHEC is also developing full

environmental profiles for each of the finished pieces using its ground-breaking life cycle assessment (LCA) research.

For the 19 American hardwood species and all data concerning materials, energy usage, transport and wastage recorded during the manufacturing process, AHEC has calculated that it would take less than 2 seconds for all the wood used to grow back in the forest!

Mr. Roderick Wiles, AHEC Director for Africa, Westa and South Asia and Oceania, said: "Collaborative projects such as Seed-to-Seat have proven to be a highly effective way of stimulating interest in American hardwoods from designers. They also serve as a means of demonstrating the beauty of widely-available, yet under-utilized American hardwood species."

The designers involved with the South African project were Mr. Andrew Dominic (Andrew Dominic Furniture), Mr. James Mudge (James



2



3



4

2 For the 'Blue Chair' (left), Dokter and Misses revisited its iconic steel work in American Tulipwood. The 'Eve Chair' (centre) by Andrew Dominic has an ergonomic backrest, and is made of ebonized American Cherry in a fine geometric weave. The DEM (right) is an event seating solution, designed with clean and simple lines, whose strength-to-weight ratio is provided by American Tulipwood.

3 David Krynauw's 'Playbench' is playful, spatial and interactive, inspired by geometry and three circles coming together.

4 This hardwood chair by James Mudge is designed to use minimal timber and derives its inspiration from Scandinavian origins. Its construction employs all traditional jointing techniques that could last for generations of use.

Mudge Furniture Studio), Mr. Laurie Wiid van Heerden (Wiid Design), Mr. Christoph Karl (Guideline Manufacturing), Mr. Jacques Cronje (minima), Mr. David Krynauw (David Krynauw) and Mr. Adriaan Hugo (Dokter and Misses). For more information, visit [www.seedtoseat.info](http://www.seedtoseat.info).

AHEC is the leading international trade association for the US hardwood industry, representing exporters among US hardwood companies and all major US hardwood production trade associations.

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



# What customers really want!

In times of Industry 4.0 and digitisation, it is becoming increasingly important to optimise processes and to build on end-to-end solutions. How such implementation can look is seen in the Imos' customer, Creative Closets, from Saudi Arabia.

*By Bathe Ingo*

As long as bespoke furniture meets customers' requirements in quality, functionality, style and availability, the customers are willing to pay high prices for it. Even better is if there is a unique solution behind the furniture installation that they can tell to friends and family.

So feeling, a unique environment and a high quality home transfers the demands of the new status symbol.

Customers are looking for a closet in your bedroom in any shape and size you want: wall-to-wall and floor-to-ceiling, or perhaps

L-shaped with sliding doors, or even a walk-in closet, if you have the space.

In Maan Aljasser & Co. brand 'Creative Closets' you will get it. But to deliver bespoke solution day in and day out needs more than a workshop. That is where Imos comes in.

In 1997, the Riyadh-based Maan Aljasser started making home storage and organisational furniture – closets, wardrobes, TV cabinets and book-cases. The interesting thing about this company is the way it designed and produced them. Rather than offering a standard closet or storage item, Creative Closets offered the custom-made smart closet.

The concept is revolutionising the way the affluent elite store and organise their personal belongings. Here's a storage product that optimises storage space and helps people organise their personal belongings elegantly in an easy-to-find way.

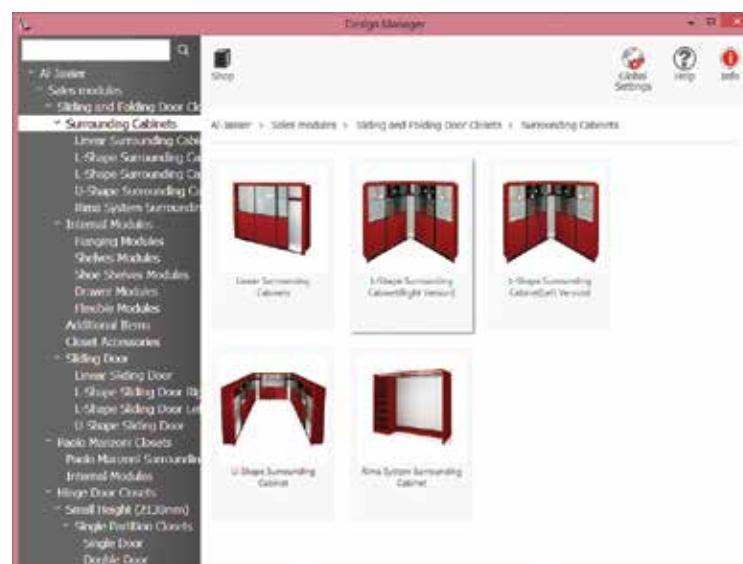
## PoS to production

The interior is the functional part of the closet. Based on clients' specific storage needs and the available space in a room, a trained designer produces a preliminary closet design for production.

For Imos, the goal was to create a continuous flow of data from the point of sale (PoS) direct to Maan Aljasser's production facilities. Various scalability issues were faced during initial execution.

The Imos project started after several requirements that were met – such as integration with the ERP that enabled a streamline operation that increases efficiency and productivity. It provided a potential capability to scale up and meet the future growth of the business.

Sales talk or planning with architects and building owners are no longer imaginable today without professional 3-D presentations. Materials and illumination make the geometry come alive, and with just a few clicks of the mouse the desired views with a presentable offer can be created from impressive rendering of the room situation, right up to technical details of the drawer runner.



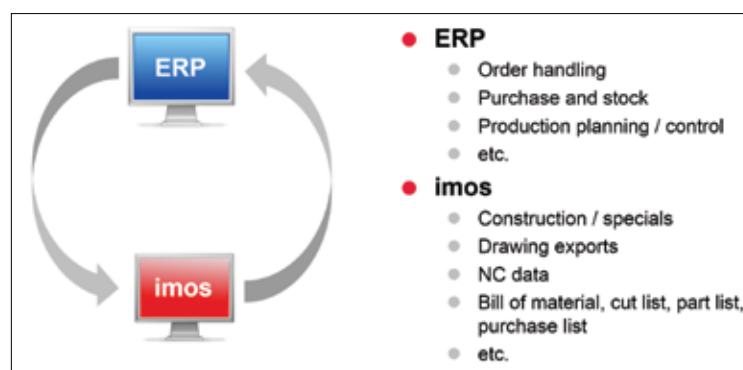
This solution is now the foundation of Creative Closets' daily business in its shops and sales offices in 12 locations in the UAE, Bahrain, Qatar, Lebanon and Egypt.

### Perfect processing

On the basis of the planning an offer can be created. The offer can be saved in a basket and edited afterwards. Prices can be modified if required, positions added and discounts allocated. Finally, the offer is output in a professional manner. The offer structure is shown in the production part list again.

Different list formats, sorting parts and methods of grouping parts can be output with the Report Generator: cutting lists with sorting according to name and material, manufacturing lists with material, surfaces and edges.

Alongside this the purchased part lists with prices, lists with profiles and edges, coating and surfaces and furthermore, labels including graphics and partly relevant CNC program number, as well as a structured bill



of materials with allocations from individual parts to article and position groups.

Company-specific software solutions are often applied for order processing, production planning and controlling (ERP/ PPS) as well as finance and accounting. The BoM created in Imos can be transferred to the company software environment via interface.

*– The writer is Director of International Sales at Imos AG.*



## Alphacam a must-have for CNC projects

1

**1** *Alphacam modules are built using one core foundation, but ensure compatibility with other CAD systems.*

Alphacam is the most widely used independent system for computer-aided manufacturing (CAM) globally, with over 27,000 licenses in 85 countries.

Ease of use is just one of the reasons why it is the industry standard and system of choice for programming CNC routers. Tooling and machining techniques unique to the industry are accommodated by Alphacam's dedicated router modules.

Part of the Vero Software group – the largest supplier of CAD/CAM solutions worldwide – Alphacam seamlessly integrates both 2-D and multi-axes machining, providing an extensive list of cutting strategies which can be applied to any type of component.

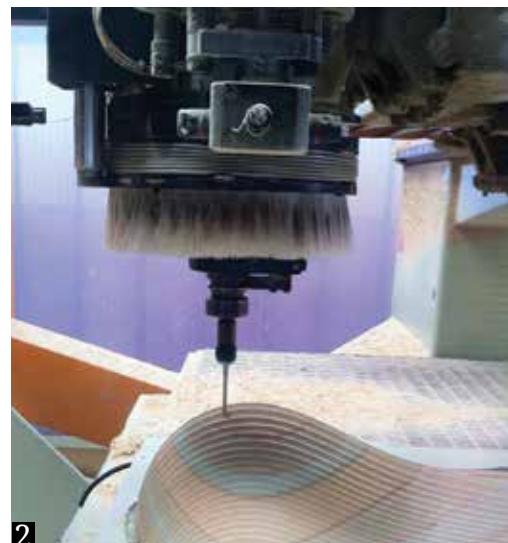
The emphasis behind Alphacam is to provide customers with productivity, reliability and flexibility. Its strength is in providing world class innovative solutions that give the end-user software applications that are essential to the design and manufacture of their products.

### Core foundation

All Alphacam modules are built using one core foundation which includes geometry creation commands. Import options for DXF, DWG, IGES and a variety of solid model formats ensure compatibility with other CAD systems.

All modules have user-defined tool and material libraries controlling many of the important machining parameters such as tool direction, automatic lead-in and lead-out, corner cut options (straight, roll round or loop), G41/42 tool compensation and automatic calculation of speeds and feeds.

Alphacam Art is the ideal 3-D relief modelling and machining software for CNC routing and engraving projects such as carving decorative ornate panels and doors, swept flourishes,



2

custom millwork, architectural mouldings, dimensional signage, bespoke company logos, jewellery pieces, custom gifts and awards.

Horizontal aggregates for machining parts, such as hinge reliefs and lock mortices, are easy to control using Alphacam.

Its automatic nesting functionality maximises material utilisation. Parts can be selected from the screen or a kit of parts, and their orientation fixed (if grain direction needs to be maintained) or rotated to any angle. Nesting supports tool lead in/out, support tags for small parts and multiple depth parts where an onion skin is required.

Alphacam is designed to offer businesses enhanced productivity, exceptional reliability and additional flexibility.

An ongoing development and enhancement programme ensures it keeps pace with the changing needs of users throughout the woodworking industry, while delivering maximum return on CAM investment.

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



# alphacam

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Alphacam is a completely integrated CAD/CAM software solution designed to offer your business enhanced productivity, exceptional reliability and additional flexibility. Alphacam is the industry standard and system of choice for programming CNC routers, providing significant material and time savings.



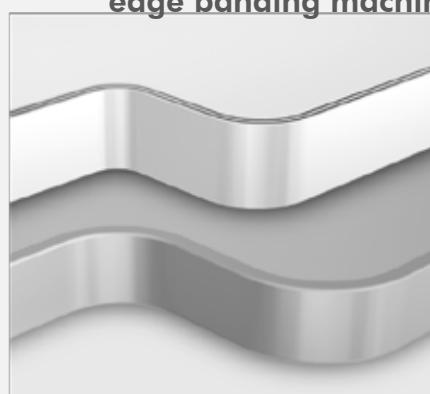
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NEW CONCEPTS



ATRO GO

# Bessey's next-generation body clamp



1

The popular Revo body clamp from Bessey has been upgraded with added power and safety features. It clamps and expands work pieces with fragile surfaces in a powerful yet sensitive manner. The range of sophisticated accessories ensures that there is a suitable solution for almost every application.

With up to 8000 N of clamping force, the new Revo KRE body clamp has a powerful grip thanks to its metal-reinforced plastic housing and optimised sliding arm. The double slide protection holds the clamp reliably with the set clamping force and prevents any unintentional slipping of the sliding arm when in the unclamped position.

In addition, the innovative body clamp design has an ergonomically shaped twin-component plastic grip with an internal hex. This enables

**1** The Revo KRE body clamp is available in clamping widths ranging from 30 cm up to 2.5 metres.

**2** The twin-component plastic grip with an internal hex enables application of clamping force with a maximum tightening torque of 17 Nm.

application of the right clamping force with a maximum tightening torque of 17 Nm.

The large clamping surfaces, which sit at right angles to the rail, have three removable and glue-resistant protective caps. The two detachable work piece supports can be shifted along the rail to elevate fragile wood surfaces from the rail surface. These prevent the grooved steel rail from making contact with the work piece.

The Revo KRE body clamp is available in clamping widths ranging from 30 cm up to 2.5 metres, while the KREV Vario version covers clamping widths of over 1 metre.

The variable model is equipped with an infinitely adjustable top section that can be shifted at the touch of a button. When it is positioned in the centre of the work piece, the weight can be well distributed especially when an object is clamped for an extended period.

Irrespective of whether it is the variant with the fixed or variable head, both models are equipped with an end stop that can be removed without the need for tools. As a result, removing the sliding arm from the rail and repositioning it for an extension application is very straightforward.

For clamping at non-right angles, the KR-AS tilting adapter is available. It can be easily slid onto the clamping jaws and is infinitely adjustable within a tilting range of 30°. The Revo body clamp has a practical extra feature for clamping frames: the variable frame press KP. It consists of four 90° angles. It can be used to custom-adjust the clamping pressure by inserting two clamps per corner.





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1



2



3

The vertical beam saw from Felder's Format-4 Series ensures a large increase in productivity. A robust and compact design guarantees highest precision and efficiency with minimum space requirements.

**1** The Kappa V60 Classic.

The solid, single-piece frame construction, with a saw carriage running on steel rails, guarantees cut accuracy to one-tenth of a millimetre. The scoring unit with two carbide blades ensures splinter-free cutting of coated panels without compromising the cutting height.

A wide range of accessories that assist the user with improved handling and operation are already included in the standard equipment of the machine.

The new Kappa V60 Classic range offers performance at attractive introductory prices with three models: the Kappa V60 16.25 Classic, the Kappa V60 19.32 Classic and Kappa V60 22.42 Classic.

**2** Felder's working tables are unbeatable in every performance class.

working tables are versatile in their use and always offer maximum stability and simple mobility.

Felder's FAT 300, 300S and FAT 500S working tables are unbeatable in every performance class.

The solid frame on robust wheels, easy-to-use foot pump hydraulics and extremely durable working surface ensure that stability, manoeuvrability and a comfortable working height are always guaranteed.

The FAT 300 S and 500 S models can be equipped with a panel-tilting device for panels up to 2800x2070 mm if required.

#### Working tables

Machine equipment trolley, file assistant, stacking trolley or additional work space: the choice is yours! The height-adjustable Felder

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## Anti-bacterial boards in India from Finsa

Finsa, the Spanish manufacturer and exporter of particleboard and MDF since 1946, has launched CompacMel Plus, a wood HDF compact laminated board with anti-bacterial properties.

CompacMel Plus is specially designed for use in highly humid indoors as well as sterile environments, or for applications requiring high resistance to avoid bacterial contamination.

These boards are ideally suitable for all hospital, clean rooms and pathological spaces, as well as gyms, schools and colleges, office and residential areas. This product is also ideal for cafeteria, desks and lockers.

CompacMel Plus is a compact high-density wood fibre board with a density of more than 1000kg per cubic metre with excellent mechanical properties. Due to its high density, this product is the ideal alternative also for high thickness partitions, which helps to reduce the dead weight and also in creating more space for utilisation.

CompacMel Plus provides a high strength decorative melamine protection and is

available in various vibrant colours in soft texture in the thickness range of 8 mm to 13 mm.

It is an environment-friendly product made from 100% recyclable and sustainable wood that is certified by both, the Programme for the Endorsement of Certification (PEFC) and the Forest Stewardship Council (FSC).

### Advantages

- High quality at competitive cost
- High moisture resistance (tests V313 & V100)
- Excellent mechanical properties (bending & tensile strength)
- Impact-resistant
- E1 (low) formaldehyde classification
- Easily machined (cutting and drilling) & installed
- Wide range of decors and versatile designs

Finsa is represented in India by the Pune-based Sleek Boards Marketing Services LLP.

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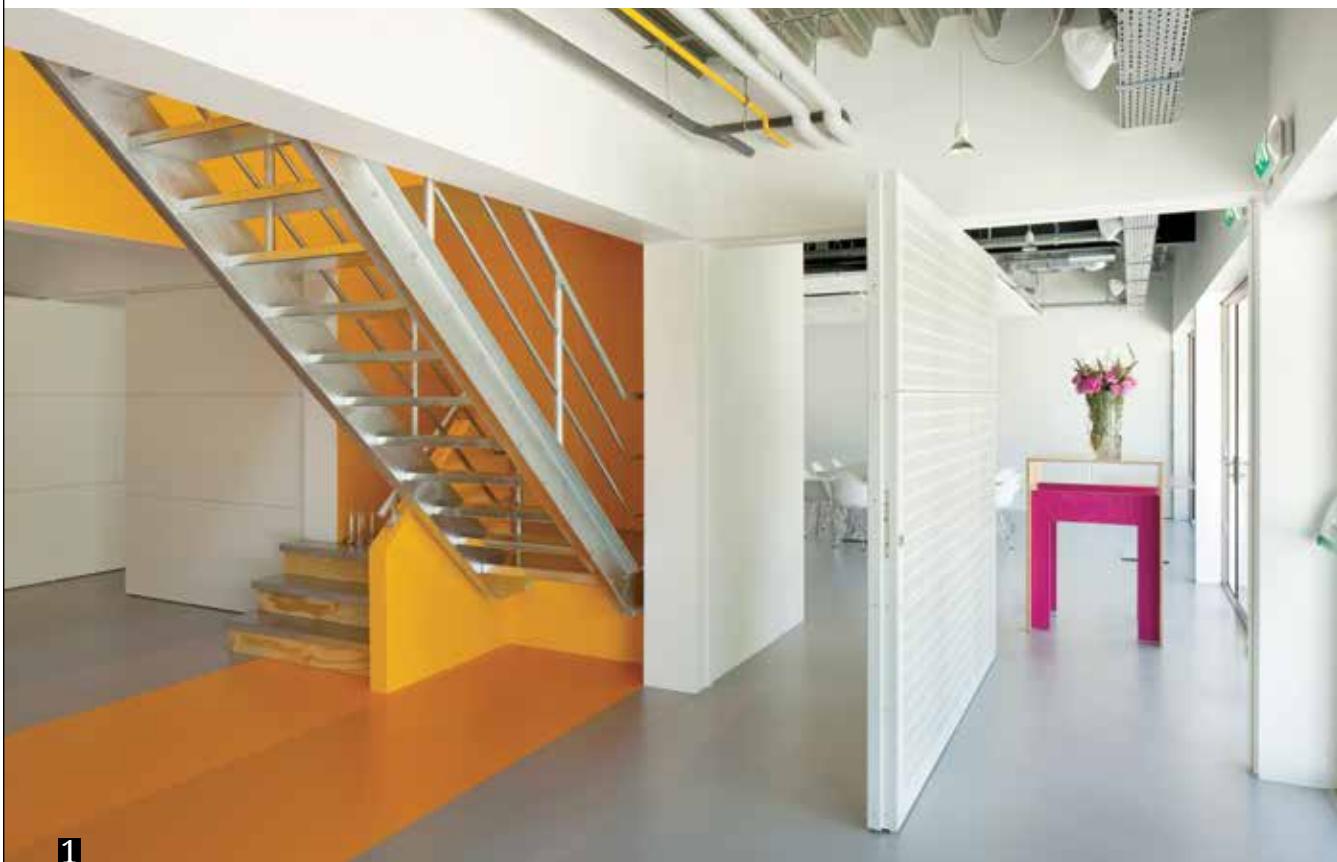
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## Hafele widens options for doors



1

Pivot doors are rotating walls. In a closed position they are virtually invisible; in an open position they can determine the space.

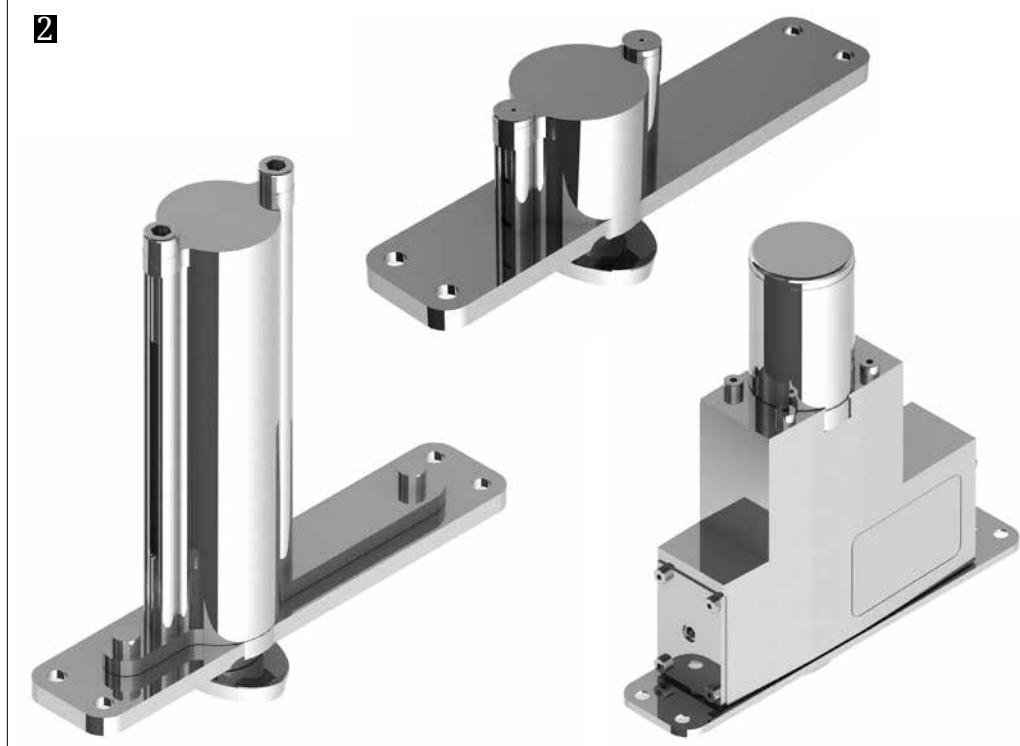
Hafele's pivot door systems enable you to

create design elements that can influence space, functionality and perception. These systems are the world's most innovative pivot door systems, which are fitted 'in the door' instead of 'in the floor or ceiling'.

2

1 Pivot door with 180-degree opening.

2 Three door pivot systems introduced by Hafele.



This cost-effective and time-saving construction makes it possible to fit pivot doors at anytime, anywhere, including in existing buildings.

Three unique systems offer diverse functionality and features, including a dual-acting pivot with variable closing speed, precise adjustability of every door's position and closing angle. System-One and System-3 can be rotated by 360 degrees, with no limitation on maximum width, height and thickness.

The Hafele pivot door hinges utilise high-performance bearings that have been tested beyond one million cycles, providing maintenance-free operation of door panels of up to 500 kg.

#### Lever handles

Hafele's range of pull handles and lever handles presents a modern and sophisticated look for doors. Available in multiple finishes

and sizes, these handles are sturdy, durable and exhibit a stylish aesthetic appeal.

Contemporary handles like these are an impeccable solution for your clients' wooden and glass doors.

These new handles offer fresh designs ranging from straight to sinuous and follow the latest trends prevalent in the international industry to give you every imaginable application possible, making them the ideal choice for your doors.

The range encompasses handles made from a variety of materials like high-grade stainless steel, aluminium, brass and zinc alloy – each material having unique properties that suit specific environments.

Hafele's range of pull handles and lever handles create a long-lasting impression and harmoniously blend form with wooden and glass doors to provide complete functionality.

**3** Hafele's range of pull and lever handles is made from high-grade stainless steel, aluminium, brass and zinc alloy.



# Homag meeting IoT requirements

Homag recently unveiled 50 machines from all performance classes that are designed for Industry 4.0 standards, employing 'Internet of Things'. Using comprehensive software, which covers point of sale, the entire production line and packaging, the machines incorporate the latest intelligent technologies and processes that enable it to exchange data and communicate with each other.



## HPS 320 flexTec

Developing on its fully automated HPS 320 flexTec robotic cutting cell, the company has now made it possible to implement order-based production over longer distances without a machine operator and a non-interlinked cutting cell, operating solely in the saw-storage combination.

The HPS 320 flexTec thus opens up brand new possibilities for medium-sized businesses and larger craft enterprises. Single panel cutting processes, fully automated production workflows, unlimited recuts: these are the advantages of the HPS 320 flexTec in batch size 1 production.

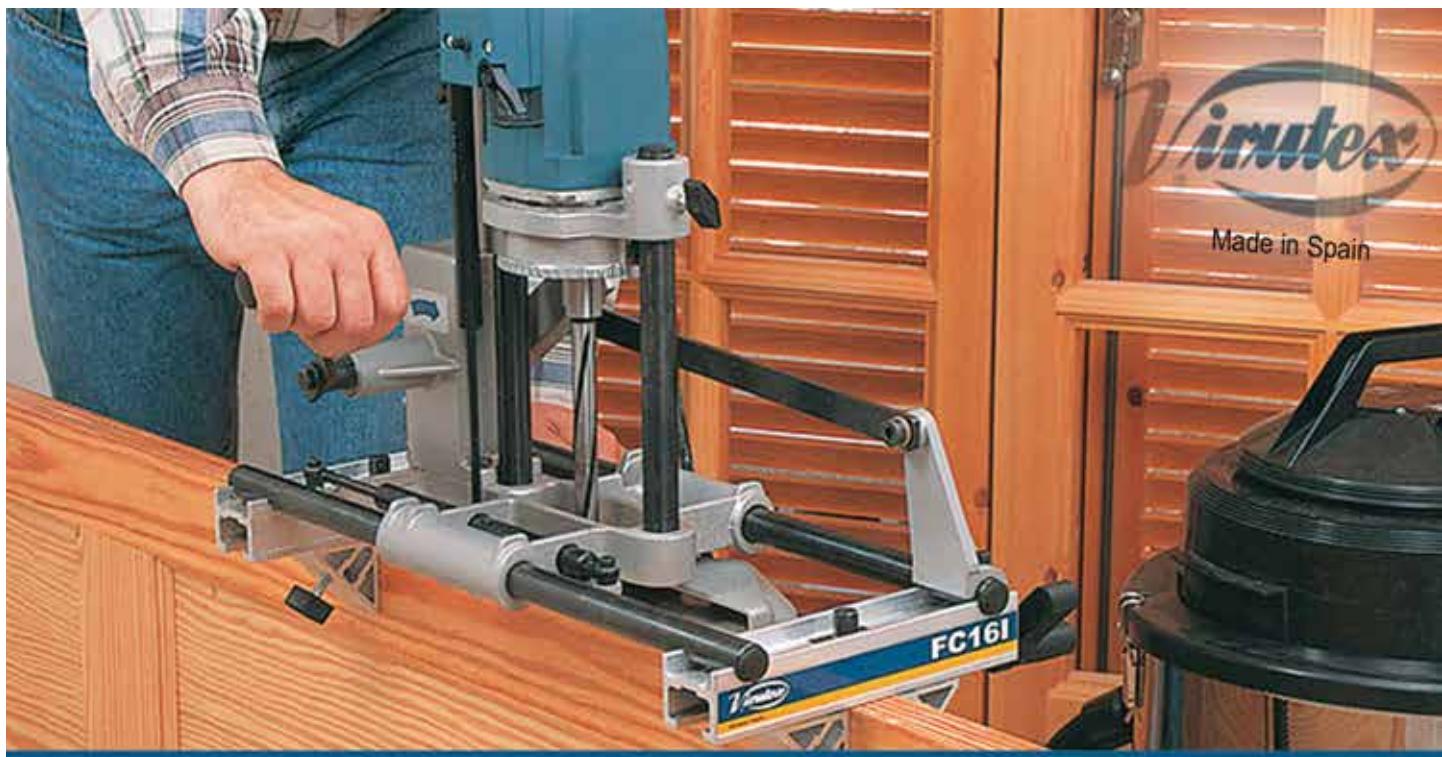
## Ambition 1650 airTec

A factory wishing to manufacture an "optical zero" joint can use the new airTec method on this machine that offers the perfect combination of a superb zero joint, simple handling and complete automation.

It is fully equipped with multiple-stage technology at the trimming unit and scraper blade (2 radii or flush trimming).

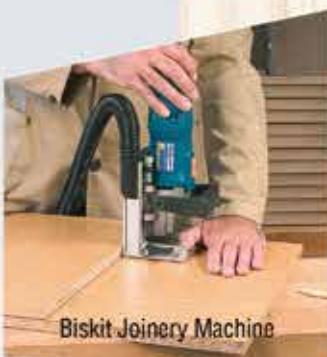
The technology is available for edge banders with a feed rate of 8 to 25 m/min. The energy requirement has been reduced by 10-30 %. The method can be used right from the Ambition series 1400 through to the high-end machines of the KAL 370 series.





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### GSF 100 series

Homag is now offering a new finishing technology product range for the coating of furniture, interior fittings and stair components. The new GSF 100 series of spray machines can be used as both a stand-alone spray machine or as part of an extensive finishing line.

The series is among the most compact automatic spraying machines in its class and is used for automated finishing of furniture parts, doors, stair components and interior fittings.

### BMG 310 series

With a robust and stable sliding-gantry design constructed in welded steel, the BMG 310 series delivers everything required for a wide range of applications and potential configurations.

A proven console table in the dual-circuit system with LED setup aid or an automatic table plus versions designed as a CNC trimming centre or as a machine for shaped edge banding cover all the fields of application.





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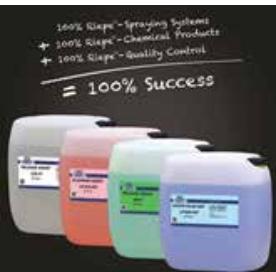


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**vero**  
Software

## Spray System from Germany to Enhance Edge Finish Quality

- Electronically controlled Spray Units, directly installed on EDGE BANDING MACHINE
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- Polishes PanelEdges to make it Smooth &Glossy.
- Cost effective way of getting perfect edges.



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**Bangalore:** +91 80 23468088/55 | **Coimbatore:** +91 422 2522114

# Fire-retardant coatings from ICA



Fire-retardant coatings slow down the spread of flames in the event of fire, limiting the damage thanks to agents in the coatings that interrupt the combustion.

When making public buildings such as theatres, cinemas, auditoriums, hospitals, schools or hotels, it is important to meet European fire prevention standards.

Designers and clients must also ensure high aesthetic standards and, therefore, need coating cycles that provide a high top coat.

The Prometea line is made up of water and solvent-based fire-retardant coatings to meet the strictest fire prevention regulations, the European standard UNI EN 13501, Italian

standard UNI 9796, through to the British Standard.

The ICA Group's line of fire-retardant coatings includes transparent, white or pigmented coating cycles, with fire resistance certificates to meet all needs. These cycles are very popular on the market as they combine physical and chemical performance with excellent top coats.

The ICA Group has also developed specific coating cycles for nautical furnishings, that pass the strict tests required by the Marine Equipment Directive (European Directive 96/98/EC).



## WOODNEWS

*WoodNews* thanks the various companies that have submitted information. For any editorial submissions, please contact Mr. Dhananjay Sardeshpande, Chief Editor, at [dhananjay@pdatradingmedia.com](mailto:dhananjay@pdatradingmedia.com). The information published in this, *Notes and News*, *MumbaiWood 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.

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**4** Doors that close properly



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**7** Doors protection from fire



Fire protection



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# Sales planning for professionals



1

Imos AG is now offering the Imos plan 2.0, a CAD desktop planning solution where the operation is simplified, the output improved and the speed optimised in order to keep up with the established kitchen planning packages.

Plan Link is the associated web service that updates the catalogues and sends the customer orders to the manufacturing plant. The focus of the online applications lies in the 3D configuration and planning.

These applications have now been expanded technologically, so that any kind of furnishing elements can be processed. It is now also possible to configure and plan seating and upholstery furniture or bought in parts.

To this the possibility to simulate kinematic movements can be added, such as the seat mechanics of a chair or the opening and closing of a sliding door. The configured furniture can now be combined into a room planning.

Decoration elements are added and, if necessary, global changes can be made to the entire planning process. Afterwards, wall views, including dimensions, can be generated automatically or a high-quality almost photorealistic image can be calculated.

## iX Plan

- New planning functions (snapping,

insertion height via variables, automating contiguous parts)

- New design manager like in NET
- Appliances and decoration via catalogue
- Automatic cut-outs in worktops (sinks, cookers, etc.)
- Automated drawing derivation (elevations and plan view)
- Insertion of suspended ceilings including lighting.

## Imos Plan Link

- Online service to connect dealers (PLAN) and producers (Imos CAD)
- Basic data synchronisation
- Order data transfer

## iX Plan Catalogue

The new Imos iX comes with a full library of kitchen designs that is to be ready for use within 15 days. System 71.5 cm is based on five whole grid heights of 13 cm each and a semi-grid of 6.5 cm, which results in a base unit height of 71.5 cm.

Four different carcass depths of 35, 46, 56 and 66 cm are possible. The plinth height offers scope in five heights between 10 cm and 20 cm. There is also a choice of two different thicknesses for worktops.



Patented Design. Made from Special Material after extensive R & D.

No need to replace Top Skin even if it gets damaged – **Big Saving in Operating Cost.**

30% more holding power enabling use of higher feed speed – **Higher Productivity**

Variety of Sizes available to suit holding of all sizes/shapes of workpieces – **Flexibility**

Modular design – **Very Easy Maintenance**

Practically Unbreakable – **10 times more life than normal cups**

**Suitable for all CNC make & models (Homag, Biesse, Felder, SCM etc.)**

## High Holding Capacity Vacuum Cups for CNC machines to improve Productivity

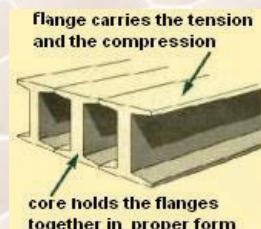
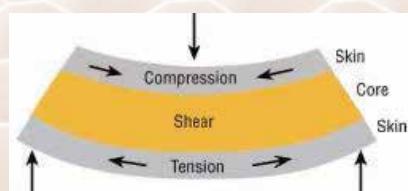


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### A Revolutionary Paper Technology In Sandwich Construction:

The purpose of a core in a composite laminate is to increase the laminate's stiffness by effectively "thickening" it with a low-density core material. This can provide a dramatic increase in stiffness for very little additional weight.

The figure opposite shows a cored laminate under a bending load. In this mode of loading it can be seen that the upper skin is put into compression, the lower skin into tension and the core into shear. Consequently, one of the most important properties of a core is its shear strength and stiffness. In addition, particularly when using lightweight, thin laminate skins, the core must be capable of taking a compressive loading without premature failure. This helps to prevent the thin skins from wrinkling, and failing in a buckling mode.



The Honicel-honeycomb sandwich construction may be compared with the I-beam structure commonly used in construction industry. In an I-beam, the flange carries the tension and the compression whilst the body / core hold the flanges together in a proper form. Likewise a sandwich construction, a low density core material is sandwiched between two strong thin facings of any kind of material, resulting in a lightweight, incredibly strong, stiff composite structure, which acts in the same manner as a continuous I-beam with the skins and flanges taking bending stresses whilst the core acts as a web to carry shear and compressive loads.



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Ambattur, Chennai - 600 058  
Tel: (91) 7845097977, 9840707577  
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Website: www.honicel.com

# World-class machinery from Jai

Jai Industries offers an unparalleled array of products that include woodworking and panel processing machinery and electric motors. It is well known for its engineering quality, technology and innovation and all the machines are manufactured using premium grade metals and electrical components to ensure robust construction, unmatched reliability, high durability and proven performance.

Jai currently manufactures 30,000 machines a year in its seven plants that have a total floor area of 4,00,000 square feet. Its machines are specifically produced to suit Indian working conditions.



**J-4700.in (Auto) Edge Bander**

This machine is an optimal unit for panel edge pre-milling with two high frequency compact motors. It is equipped with individual pneumatic cylinder that prepares the panel for gluing and ensures perfect joint line of the edge.

The feed track comprises a robust feed chain and conveyor system with a German gearbox that gives straight movement and ensures effective pressure on small and big panels.

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

## Salient Features

- Sturdy heavy-duty machines for precise application of edge banding material
- Innovative pre-melting sensor-operated glue tank having glue drop system
- Consumes less than 50% glue, compared to other edge banders
- Three edge banding pressure rollers

actuated by pneumatic cylinders that gives adequate pressure on edges for effective banding

- Electronic/pneumatic parts from international brands Schneider and Janatics
- Accessible, user-friendly control panel at the in-feed for quick operations.



**J-5100PRc.in (Auto) Edge Bander**

This machine is an optimal unit for panel edge pre-milling with two high frequency compact motors. It is equipped with individual pneumatic cylinder that prepares the panel for gluing and ensures perfect joint line of the edge.

It has an innovative pre-melting sensor operated glue tank with a glue drop system to automatically maintain required glue level in the tank. This ensures the glue spreading roller provides precise & consistent application without overheating to avoid wastage of glue. This result in 50% saving of glue.

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

Two compact and powerful high-frequency motors sliding on two prismatic guide ways with recirculation ball bearings guarantees best edge finish, while a trimmer 2R cutter for PVC/ABS gives perfect rounding on the edge of straight, chamfered and regular post formed panel. It is also equipped with Independent adjustable buffering wheels, for cleaning and polishing the panel edges.

The control panel is easily accessible with a user friendly smart touch PLC control panel positioned at machine in-feed, for easy and quick operations.



### J-5500PRc.in (Auto) Edge Bander

#### Salient Features

- Sturdily built heavy-duty machine for precise application of material
- Edging wooden strip up to 12mm
- Robust feed chain and conveyor system with a German gearbox (with long life synthetics lubricant) for effective pressure on panels
- Pre-heating at in-feed fence to remove moisture from panel
- Pre-milling unit that smoothes the panel for perfect joint line of the edge
- High performance machine with a feeding speed of 14 metre /min that results in more production
- Innovative pre-melting, sensor-operated glue tank having glue drop system, which consumes less than 50% glue, compare to other edge banders
- No setting required to change thin to thick PVC edge band
- Easy to change over from PVC to wood
- Three edge banding, pressure rollers actuated by pneumatic cylinders and gas springs, that give adequate pressure on the edge for effective banding
- High frequency compact motors sliding on prismatic guide ways for perfect finishing with trouble free performance
- Grooving unit to make grooves on the lower panel surface
- Easy accessible, user-friendly, smart touch PLC control panel positioned at machine in-feed, for quick operations
- All electronic and pneumatic parts from well known international brands
- Easy to operate and minimal settings required during operation
- Low maintenance machine with easily available, cost-effective spares



### J-2103.in (Semi-Auto) Triple-Head Multi-Boring Machine

This machine, available in single head & double head also, is useful for vertical and horizontal drilling to the surface or edge of the work piece. Mainly suitable for making knock down furniture, it offers multiple application, flexibility and high-productivity.

The two vertical heads can slide away from each other depending on the center distance required between them. They can also be rotated by 90°, giving more locational positioning. The aluminum fence has four reference stops that slide on support rollers for smooth positioning making it easy to feed long work pieces.

Boring depth adjustment can be easy & quick for setting the horizontal boring head. The auxiliary support frame gives better solution for long panels.



#### Technical Details

Maximum working thickness	mm	70
Maximum Size of Work Piece (LxW)	mm	3000 x 1220
Number of Spindle Head	no.	Three
Number of Spindles Per Head	nos.	21
Center Distance Between Each Spindle	mm	32
Minimum Center Distance Between 2 Vertical Heads	mm	200
Maximum Center Distance Between 2 Vertical Heads	mm	1220
Shank diameter of drill	mm	10
Spindle Rotation Speed	r/min.	2800
Maximum Drilling Diameter	mm	32
Drilling Depth	mm	0~50 (drill length 70 mm)
Electric Motor-3 Phase	no / hp	3 x 2
Total power	hp	6



#### Technical Data - J-1325VT

X-Y-Z axis working area	mm	1300 x 2500 x 200
Resolutions	mm	0.025
Spindle		5HP, Air cooling, 18000 rpm
Drive motors		Stepper
Command code		G code
Computer interface		USB 2.0
Collet type & size	mm	ER25(12.7,6,3.175)
Compatible Software		ArtCAM/Type-3
Controls		Digital signal processor (DSP)
Vacuum Pump –Air Cooled	kw	7.5
Total Power	hp	21

#### J-1325VT CNC Router

This higher quality CNC model, allows greater workability with its ergonomically designed, control panel for engraving and designing of flush doors and kitchen shutters. The heavy ball, screw drive with high accuracy ensures technology at a reasonable cost. Cast steel structure makes the routers more stable and its auto lubrication makes maintenance much easier.

It is fitted with a precision, tool holding guide system to carry the CNC design commands. This allows great design flexibility while a convenient, separate control panel box allows flexibility and efficiency in machine operating.

Digital signal processing is applied here as the controlling system. A precision vacuum working table for fixing and sure clamping of the work piece ensures steadiness during the entire routing operations.

CNC routers J-1535 & J-2030 with higher capacity spindle are also available.

#### J-1250.in Vacuum Membrane Press

This machine with its vacuum abnormality wrapping technology is suitable for flush door and shutter manufacturers for applying a uniform lamination of PVC, decorative papers and veneer of up to 0.4mm on the top surface and borders of flat & designed work piece having a smooth shape. High performing single and double trolley models J-1252.in, J-1100.in & J-1102.in are also available.

#### Salient Features

- Used for applying a uniform lamination of PVC films, decorative papers and veneer up to 0.4mm.
- Lamination on one-sided Prelam MDF / Particle board
- One set of tray with machine for optimal usage of work tray
- Silicon membrane offered for veneer application on flat surface
- Heavy duty 3 HP German vacuum pump
- Centralized control panel for controls and display with digital temperature controllers and adjustable timers for a fully automatic cycle



#### J-4230 Four Side Moulder

#### Salient Features

- Sturdy heavy-duty machine for precise application on four sides in one pass
- 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 & their key devices are positioned on the front. Powerful drives for the cutter blocks delivers high torque for heavy duty cutting requirements

#### Technical Data - J-1250.in

Specifications	Unit	J-1100.in	J-1102.in	J-1250.in	J-1252.in
No of working tables	no	1	2	1	2
Working table size (L x B)	mm	2300 x 1100	2300 x 1100	2500 x 1250	2500 x 1250
Max. height of work piece	mm	50	50	50	50
Vacuum	mpa	-0.1	-0.1	-0.1	-0.1
Total Power	Hp	23	23	27	27

## PRODUCTS AND PROCESSES

- Top feed rollers for easy feeding of work piece
- Bed lubrication to reduce friction & improve feeding of timber
- Sealed safety to reduce noise levels, improve extraction and operator safety
- Accessible, user-friendly control panel positioned near the machine in-feed for convenient & quick operation



### J-1824 Drum Sander

This machine is equipped with two sanding drums for coarse and fine sanding in one pass. It has a user-friendly control panel with variable feed speed. It is advisable to use a dust collector with sander machine for superior performance.



Specification	J-1818	J-1824	J-1842
Maximum Sanding Width -mm/inch	300/12	610/24	1065/42
Sanding Drum Speed -rpm	1400	1400	1400
Sanding Drum Diameter -mm/inch	125/5	125/5	158/6 $\frac{1}{4}$
Power Required hp/ rpm	2/1440	3/1440	5/1440

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# Invisible clamping force from Lamello



Perfectly clamped joints, without visible fittings, have always been a challenge in furniture and interior design. The new generation of Invis Mx2 from Lamello, with 250-kg clamping force per fitting, offers an increase of 60% compared to its predecessor.

The additional power broadens the range of applications, making it possible to clamp larger and heavier work pieces. Room dividing elements, sub-constructions or large spray-painted shop fitting parts are assembled quickly and easily.

**1** The Invis Mx2 offers 250-kg clamping force per fitting.

Using Invis Mx2 for table legs, stair treads or covers is not only neat but pays off on costs with the time saved. Large bookshelves, sideboards, or tables can be glued in several manageable parts, transported and quickly assembled or disassembled in seconds.

**2** MiniMag Mx drive magnet is compatible with any standard, cordless drill.

The joining system is based on a contact-free drive, which is powered by a cordless drill and opens or closes the joint depending on the rotational direction.

It is the unique connection that satisfies the highest demands for aesthetics, stability and productivity. With no visible openings, it can



be quickly detached and reconnected at any time via its magnet drive.

Its connectors and studs are quickly and easily screwed into prepared 12-mm drill holes using a cordless drill. The MiniMag is then fixed to the cordless drill and rotated on the surface to close the connection with a clamping force of up to 250 kg per connector.

## Function

- The MiniMag Mx drive magnet is compatible with any standard, cordless-drill with a speed of 1200-1500 minute
- The rotating magnetic field of the MiniMag Mx drives the connector just as one cog wheel drives another
- The thread on the connector attaches screws into the internal thread of the stud, driven by the contact-free magnetic field
- To undo the connection, simply reverse the rotational direction of the drill.

## Benefits

- The connection is always detachable
- Powerful screwed-joints with 250 kg clamping force per connector
- Easy handling due to the installation tolerance
- Perfectly clamped joints without the need for clamps.

## Applications

- Quickly detachable but securely mounted table legs
- Invisible mounting of stairs on-site
- Join wall panels and separation walls without the need for holes
- Transport fitted wardrobes and large items of furniture in multiple parts for quick, invisible assembly on-site
- Gluing aid for high-gloss surfaces without leaving marks
- Clamp curved elements on-site without complicated devices.



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DOOR



FRAMES



DOOR



FRAMES

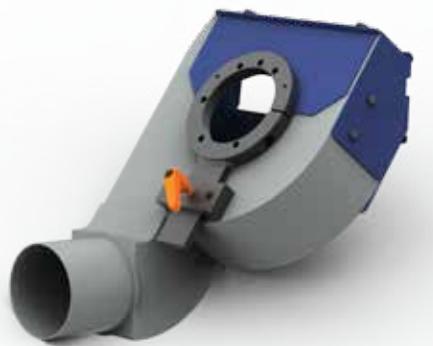
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# Optimal tooling solutions from Leitz



Leitz is the leading manufacturer of tools for industrial processing of wood, wood derived materials, plastic and compound materials. Its product spectrum covers the complete range of precision tools for automated machines.

Material versatility, demanding finish coatings and 'zero joint' in edging technology are important innovation drivers. Throughout the total process chain, the company delivers optimal tool solutions that improve quality and efficiency decisively and are tailored to the respective processing job.

## EdgeExpert tools

The proportion of working material surfaces, difficulty in machining and constant increases in furniture and interior construction requires new tooling concepts such as the Leitz EdgeExpert program.

Whether extremely thin paper decors, veneers or foil and high-gloss coating, Diamaster EdgeExpert tools with increased shear angles results in tear-free edges and smooth, medium layers on continuous machines and CNC machining centres.

Additionally, the EdgeExpert program has economic benefits: the Diamaster EdgeExpert routers, for example, achieve about 15 times longer performance times in comparison to conventional routers.

## RazorCut blades

By saving one process step on sizing single panels or low stacks of panels, efficiency can be considerably increased. The combination of low-vibration laser ornaments and irregular tooth pitches with high-quality ultra-fine grain cutting materials with the Leitz RazorCut programme ensures perfect cuts and require no rework.

## Compact hogger

The compact hogger, DT-Plus, reduces costs in furniture production. As a result of its completely new edge arrangement, the tool works with constant cutting width during its total lifecycle.

Increased re-sharpening areas on the edges ensure up to 12 re-sharpening cycles and thus maximum efficiency. Gullet areas with irregular pitch and innovative tool body geometry further result in low noise and vibrations.

Low vibrations and also the tipping with roughing and finishing knives increase the cutting quality of the new hogger.

## Extraction hoods

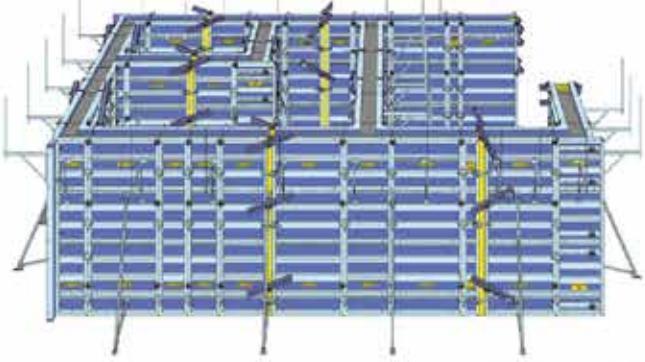
Extraction hoods are extremely relevant for processing wood. These components have enormous influence on quality, efficiency and safety and it is important that tool and extraction hoods are optimally adjusted to each other.

Even during the construction, DFC extraction hoods are adjusted exactly to the respective tools. This result in enormous cost saving by reducing the maintenance set-up and energy costs, as well as increased tool life.

Leitz also supplies a comprehensive range of circular saw blades for mitre cutting. Each conventional machine aggregate has its own product variant. A completely new tooth row design reduces the noise of the saw blades.

Leitz provides both a single scraper for multi-purpose machining surfaces and duo-multi-scrappers for high-gloss materials. Both scrapers are equipped with an anti-whitening bevel so that the edges are smooth and colourfast.

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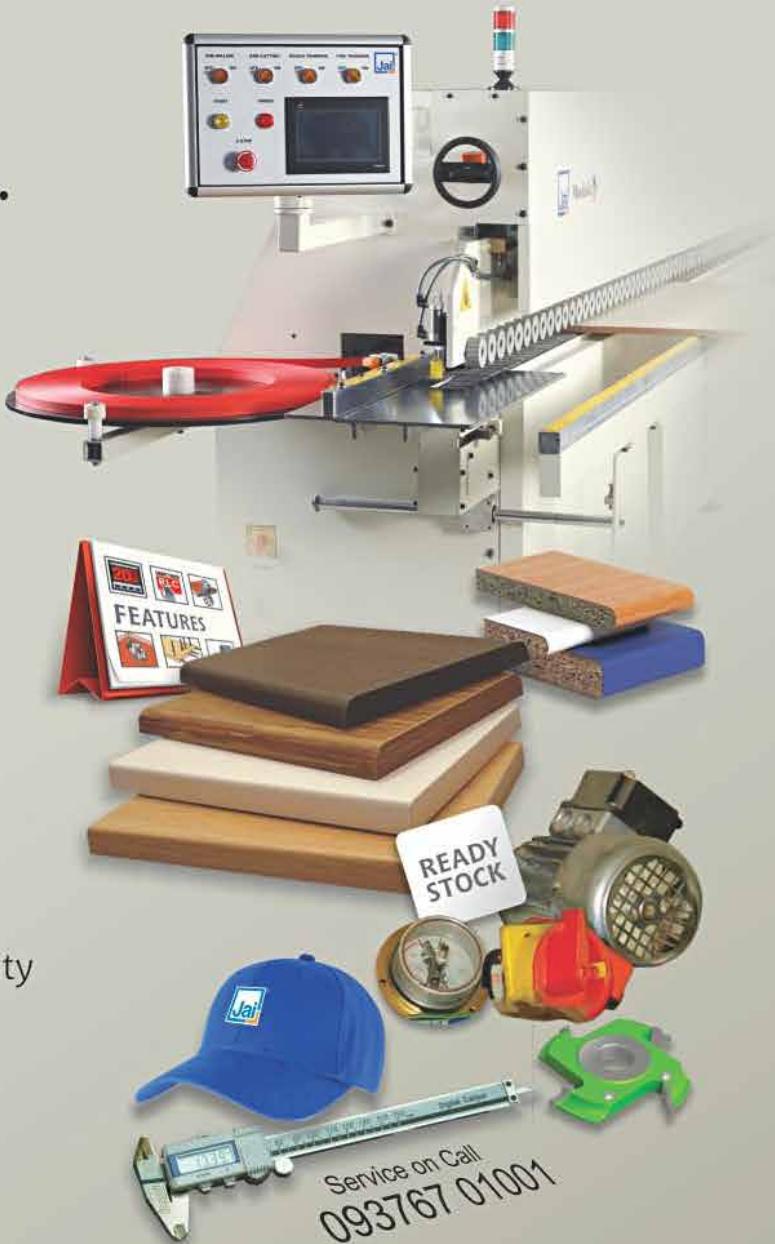
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Smart Engineering **MADE IN INDIA** Affordable Solutions

# Rehau smartly tackles acoustics, ergonomics



1

Rehau has come out with two innovations that include a diffusor panel system, Rausonic, and a smart control unit that allows adjusting the height of desks easily.

**1** *Rehau's solutions combine storage space and acoustic benefits in an intelligent way.*

With its acoustic solutions the company has developed a variety of products that produce effective and optically attractive solutions for the individual design of office spaces. The Rauvolet tambour door system, for example, uses the available surface to shield and absorb sound efficiently.

It offers two products for office cabinets. Both solutions combine storage space and acoustic benefits in an intelligent way. When opening the conventional winged doors, additional space is required inside the room which is not needed with tambour doors.

**2** *The patented Rauvolet acoustic line absorbs up to 80% of any sound, and the clear fabric surface that can be ordered in various colours.*

The patented Rauvolet acoustic-line, already widely in use, impresses as a highly effective broadband absorber of class B and absorbs up to 80% of any sound. It absorbs sound mostly linearly across the entire relevant frequency range.

Rauvolet fabric-line has a homogeneous surface without slatted look, as the tambour doors are covered with a sound transparent fabric. On account of the acoustically effective tambour door profiles, this acts also like an efficient broadband absorber. The effect is a clear, fabric surface that can be ordered in various colours.

## 'Bricks' in the wall

Rausonic diffuser panel is new in the portfolio.

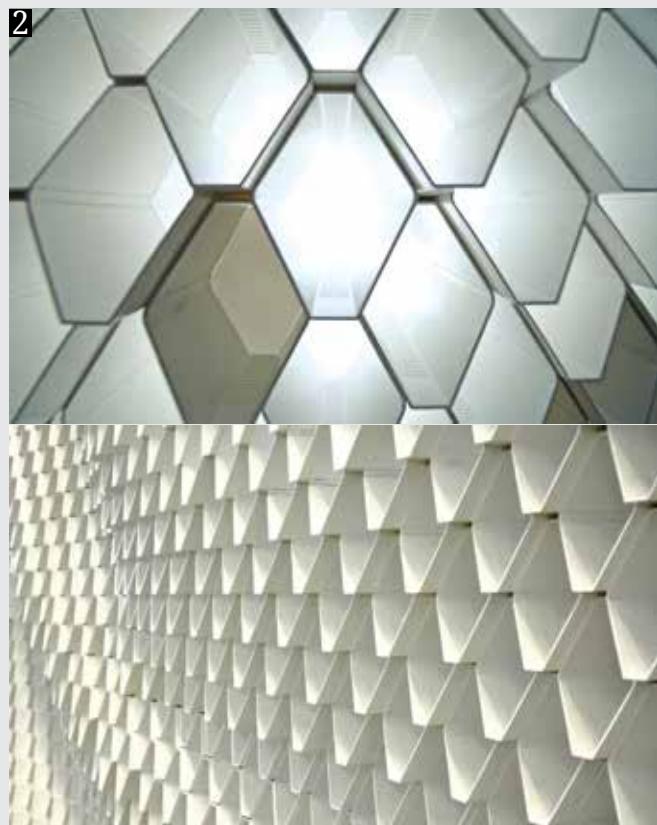
It combines highest architectural requirements with a significant improvement of the room acoustic quality. The acoustic wall is assembled by so-called "bricks" that can be arranged individually.

Thus, the dimension as well as the design can be specifically chosen. There is a choice also with respect to colouring, and translucent inserts permit a further positive feature in terms of individualisation.

The construction offers the customer a maximum freedom of design, while ensuring the acoustic properties of the system are in no way inferior. With diffusion, the innovative panel system uses a new evolutionary phase of architectural acoustics.

The sound is "scattered", thus diffusely reflected. The acoustics produced feels natural, without any noise being distractive, and can be individually optimised for every space.

Rehau offers flexibility in office design with Rauworks, a product family of acoustically highly effective screen and partition wall systems. The sound-absorbing desk partition wall system, the screen was designed especially for use at double workstations. The split screen impresses with its flexible shielding on account of its ability to individually adjust height.



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3

- 3** Rauworks offers flexibility in office design with highly effective acoustic screens and partition walls.

The lift screen partition wall, which is not fixed to the desk, can be used flexibly and allows infinitely variable, electrical height adjustment at the touch of a button. It allows not only flexible zoning within open-plan office structures, but also improves the room's acoustic conditions.

### Better ergonomics

Apart from acoustics, ergonomics is playing an ever-increasing role when planning workplaces. Stand-sit tables can be brought to the height at which they are needed.

The new feature of the smart control unit is that the height can be changed in a smart way and instead of a conventional switch the table can be raised or lowered by means of a revolving profile. The advantage is that the table can be handled from every point that is comfortable.

The circumferential profile does not affect the overall appearance, but in addition provides more free movement below the table as there is no conventional switch.

The function, which is integrated in a profile, can be used in diverse applications. For example, movement sensitive profiles in pieces of furniture are possible with which illumination, air conditioning, shadowing etc. can be controlled in a room.

## Hi-tech gripper from Schmalz



*By virtue of its integrated vacuum reservoir, this gripper system uses very little energy.*

Schmalz, the leading provider of automation, handling and clamping systems and other efficient solutions based on vacuum technology, has extended its portfolio with the area gripping system, FMHD. This gripper is robust, easy to maintain and, by virtue of its integrated vacuum reservoir, uses very little energy.

The system has been developed for the handling of naturally growing work pieces in challenging environments, such as those in the sawmill industry. The gripper can transport cut or planed goods before and after



processing as well as glued boards and walls for prefabricated houses.

It is connected via a hose connection to an external vacuum generator, generally an electric vacuum blower or vacuum pump. Internally installed valves keep the installation costs low. By virtue of its compact dimensions and low weight, this gripper is ideally suited for operation with gantries and industry robots.

It is also easy to service: A folding quick-change suction plate permits drying the ➤



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sealing foam separately from the gripper. At the same time, the interior spaces of the gripper are easily accessible for clearing out saw dust or other residues. Time-consuming refitting operations on the gripper are rendered unnecessary.

A quick-change adhesive film further permits worn-out sealing foams to be replaced effortlessly and with no cleaning required. The operator may see maintenance and standstill times reduced by up to 70%.

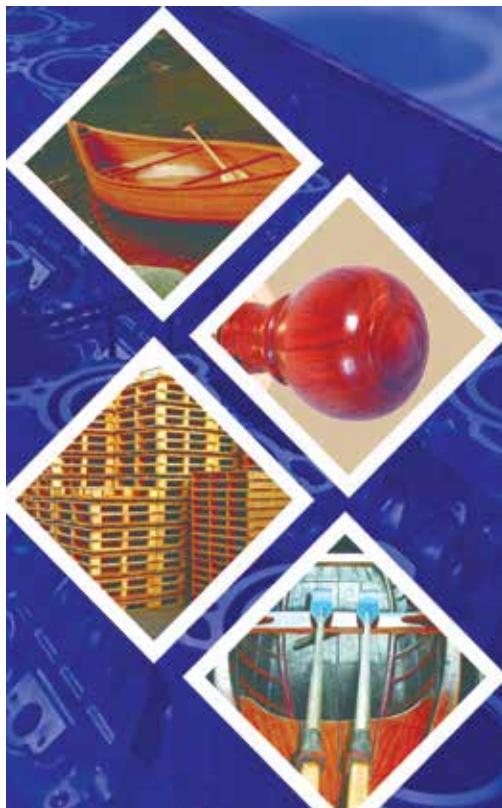
The gripper is offered in standard lengths of 1,040 mm and 1,250 mm, or can be customised.

The work piece should have a width of at least 50 mm to ensure that the gripper can lift it reliably.

It can be easily integrated into older installations and, as an option, near-field communication can be provided. This provides significant data from the system to the operator's mobile end-device in real time. As a result, process control is facilitated and faults are discovered without expensive delays.

For details check out [www.schmalz.co.in](http://www.schmalz.co.in).

## Safeguard wood with TeknoSeal



TeknoSeal, pioneers in the field of vacuum impregnation using heat cure methacrylate sealants, is known for its R&D and manufacture of high-tech impregnation sealants for advanced applications.

Wood is a versatile material having applications in industries like pharmaceutical industry (packaging), marine industry (ship building); and waterproof applications in industries like building and construction for kitchen and bathrooms.

Impregnation wood using KeknoSeal TSP99 can prevent water or moisture seepage that

can lead to fungal growth and eventual wood decay.

Marine plywood is normally treated with chemicals to kill germs, which enables its use in ships and bathrooms. As an alternative to the usage of chemical, wood impregnation process using TSP99 sealant is done.

This seals the crevices and porosities and entraps all existing fungi while preventing bacterial growth. It is water resistant and is not affected by exposure to water or moisture.

TeknoSeal's TSP 99 is used for wooden door knobs. It helps improve the machinability of wood and achieves a smooth finish for objects and decorative pieces. This gives them body and solidity, along with enhancing the robustness and longevity of the showpiece.

The sealant is used in the pharmaceutical industry for wooden palletisation. Medicines, which are exported, are packed in wooden pallets that must not have any contaminants such as fungus or bacterial matter, for safety and hygiene. The process of impregnation on the wooden pallet, whereby all crevices and porosities are sealed using TSP 99 sealant, prevents any fungal growth.

TSP 99 is also useful in home building and construction, where marine plywood is used in modular kitchens and bathrooms. The sealant makes it water resistant and prevents swelling and, thus, also finds applications in building ships, boats, canoes, oars, etc.

It can be used as an effective treatment for wooden fencing columns. As this impregnation material is not poisonous, using it in wooden fencing columns gives the required environmental resistance to wood, while preventing the probable hazards.

# Rushil Decor introducing Vir HDF



Rushil Decor Ltd., having commenced its operations with manufacturing of decorative high pressure laminates under its flag ship brand Vir Laminates, has further expanded into MDF boards over the years, catering to the ever increasing demands of discerning buyers, both domestic and international.

Vir HDF (high density fiber board), a new-age product, manufactured employing latest German technology, is an advanced form of

wood panel and is unmatched in terms of product flexibility and consistent product characteristics.

It is a value-added variant of its exterior grade Vir MDF, but with exceptional performance characteristics.

Vir HDF is made of wood fiber for various species, adding the desired synthetic thermosetting resin, by compressing and binding the fiber-resin mixture under heat and high pressure, resulting in uniform and close packed fiber distribution in the HDF board.

It finds widespread application in lamination and flooring for indoor and outdoor locations, in high grade furniture, shoe and packaging.

## Advantages of HDF board

- Double hardened & weather-resistant
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- Ideal for intricate design carving.

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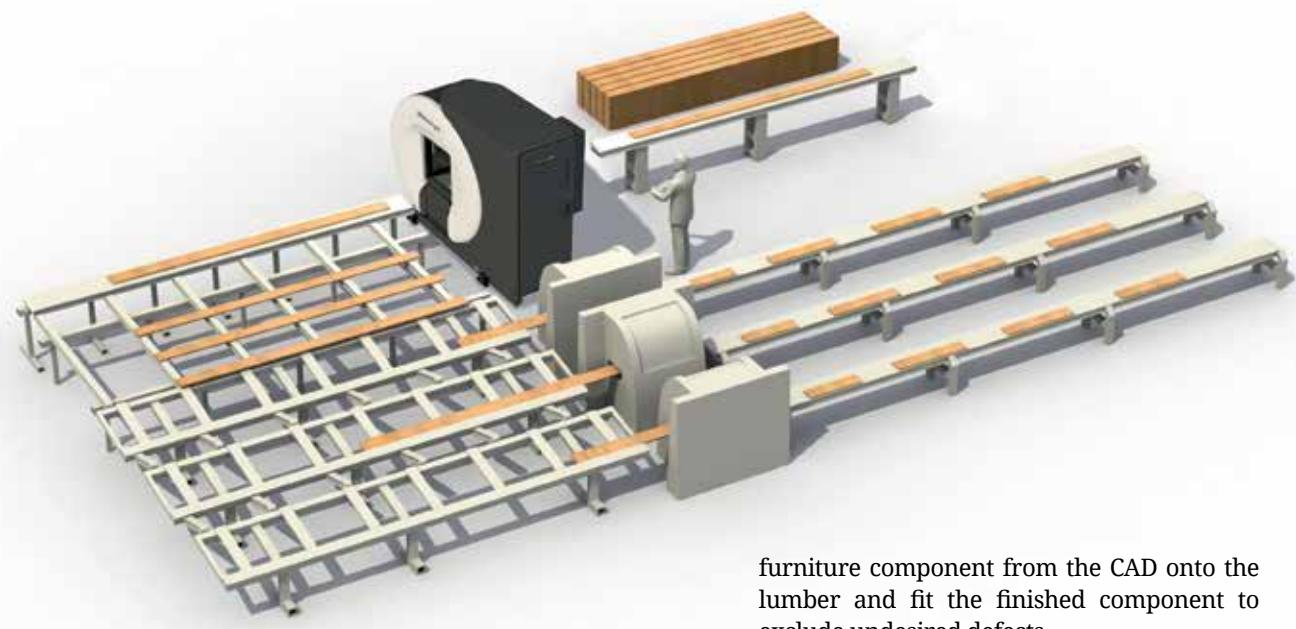
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# An eye for ‘good’ wood



The Swedish company WoodEye AB produces world leading scanner systems

that inspect and measure all types of defects in wood and ensure consistent quality, at extremely high speeds.

WoodEye 6 is a fully-integrated system that controls different types of production lines. The scanner can be monitored and configured directly with the easy-to-use operator interface on the built-in touch screen or remotely via a portable hand-held device.

It shows clear, graphic images on how the settings will affect the results and the classification of the wood and facilitates the evaluation process. This makes it simple to track trends in production on the basis of set parameters.

WoodEye cross-cut scans and analyses the lumber to optimise the cross cutting. With the aid of several established and quality assured components, the system undertakes all scanning and optimisation at full production speed.

Special sensors scan the lumber to detect a variety of defects. This information is then used to guide the cross cut saw and grading equipment to minimise waste.

The fast scanning process is simple to adapt to production needs and can be used for many different applications including window component production, construction lumber, flooring, truck flooring, FJ mouldings, etc.

The furniture application optimising software can apply the geometrical shape of the

furniture component from the CAD onto the lumber and fit the finished component to exclude undesired defects.

The system also evaluates defects on surfaces that are outside the component's outlines; surfaces that are then usually milled away during finishing work. This means the quality of the finished component is unaffected.

## 2D optimisation

When the lumber passes through WoodEye both sides are inspected simultaneously by sensors specialised in detecting various characteristics in the lumber. By using 2 to 3 cameras side by side, the WoodEye has the same resolution on the wide lumber as the normal WoodEye cross-cut on narrow lumber.

WoodEye sorter is used in trimmers, planning mills and other refining processes for sorting entire boards or various kinds of components. With customer specified software for moulding it is designed for planning profile material such as panels and mouldings.

It can be installed in direct connection to the moulder and compensates automatically for varied speed feed. The system can deal with all normal speeds for profile moulding and colour sorting helps to sort lumber based on aesthetic profiles.

The tone, colour and structure of the lumber are essential and colour sorting helps to sort lumber based on aesthetic profiles.

In addition to detecting knots and checks, this system is also able to detect “cosmetic” defects such as structural deviations and variations in degrees of darkness of solid or laminated wooden flooring systems. This optimises the crosscutting of high-quality lumber and maximizes the value of the material.



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# Wood-Mizer upgrades the WB-2000



Wood-Mizer's new-look WB-2000 wideband sawmill is now available in two versions (Pro and Economic), and has been added to its recently acquired wideband Titan sawmilling range.

**1** The WB-2000 Eco at Ligna 2017 (left) and its Pro version (right).

The new Pro and Eco versions expand its versatility and affordability and meet the varying needs of sawmilling companies. The WB-2000 can be used as the primary log breakdown sawmill, or in addition to existing equipment in order to process irregular logs and custom orders more efficiently.

The sawmill is very versatile and can be adapted to the variety of hydraulic packages and bed lengths and can saw large diameter softwood, hardwood and tropical logs from 2.4 metres to 12 metres in length.

The WB-2000 features heavy-duty construction, low maintenance requirements, and efficient operation. It uses wideband 75-mm blades or 100-mm Stellite-tipped blades. When using 75-mm blades it is especially cost-efficient in terms of blade maintenance costs.

The heavy-duty bed has a log capacity of up to 6 tonnes. All hydraulic log handling functions, such as the log clamps, chain turners, power rollers, side supports and hold-down clamps, are modular and can be moved to different positions on the bed. Various hydraulic packages with different strengths are available.

## Camera monitors

To ensure the best visibility of the cutting and log handling processes, the WB-2000 is equipped with a video monitoring system. Up to four cameras can be mounted and the

entire cutting process can be viewed on a display screen at the operator station.

The Pro version uses an automatic PLC networks system. The 12-inch touch-screen displays various parameters such as the dimensions of the material, current head height, feed position, and main engine power consumption.

To adjust these parameters, the operator simply has to use the touch screen to enter new settings. The raised platform includes an operator's chair and two joystick controls. An air-conditioned cabin is available as an option.

The Eco version uses a 5.7-inch touch-screen with the latest version of the SW PLC3 networks system. The operator station is equipped with an integrated control panel. All head functions are controlled by the operator, and hydraulic functions are adjusted with levels.

## General Specifications

- 30 kW or 37 kW electric motor
- 900 mm maximum cut width
- 6 tonnes maximum log weight.

## Special Features

- Automatic blade lubrication
- Hydraulic blade tension system
- Operator's station
- Networks
- Camera monitoring system
- Board removal system
- Chain log turner
- Log clamp
- Power roller
- Side supports.



# Wood preservative market pegged at US\$ 1.61 billion

According to a new market research report, 'Wood Preservative Market by Formulation', published by Markets and Markets, the market was valued at US\$ 1.61 billion in 2017, and is projected to reach US\$ 2.09 billion by 2022, at a compounded annual growth rate of 5.4% from 2017 to 2022.

The report takes into account water-based, oil-based and solvent-based preservatives in a number of applications (residential, commercial, industrial). It says the market is driven by the increased demand for wood preservatives from various applications, such as structural and decking, fencing, landscaping, utility, railroad, and marine.

Water-based is estimated to be the largest formulation segment of the global wood preservative market. Water-based wood preservatives include Copper azoles, ammoniacal Copper Zinc arsenate (ACZA), chromated Copper arsenate (CCA), ACQ compounds, copper-HDO and borates.

These preservatives are generally used in all applications and offer better performance for residential and commercial applications. Water-based wood preservatives leave the wood surface clean and dry, keeping it open to be painted even after the treatment.

In contrast to this, oil-based wood preservatives, for instance creosote, leave an oily surface which is not paintable. Light organic solvent preservatives contain volatile organic compounds, which can evaporate and are hazardous to the environment.

This makes the water-based wood preserva-

tives popular than other formulations. The demand for treated wood is continuously rising due to growing awareness regarding the use of wood preservatives for the long life of wood and wooden constructions.

The demand for the treated wood is propelled by the increasing disposable income of the population in the emerging regions. The use of CCA is restricted to industrial applications only and hence the demand for less harmful preservatives such as copper-HDO and ACQ is expected to increase during 2017-2022.

Residential application accounted for the largest application of the global wood preservatives market in 2016. Treated wood is used in structural, decking, fencing and landscaping in residential applications. Wooden floor constructions are easy to maintain and are aesthetically attractive.

Wooden houses also provide insulation from the cold environment, which helps keep the houses warm internally. Therefore, the applications of wood in residential constructions, decking, fencing, and landscaping are growing in developed as well as emerging countries.

Key companies profiled in the 'Global Wood Preservative Market' research report include BASF Wolman (Germany), Koopers (US), Lonza (US), Lanxess (US), KMG Chemicals (US), Troy Corporation (US), Viance (US), Dolphin Bay (US), Remmers (Germany) and Wykamol (UK).

To know more, visit  
[www.marketsandmarkets.com](http://www.marketsandmarkets.com)

## Glulam beams pass test by fire

A new report released by rethink Wood demonstrates the fire resistance rating of glulam beams, supporting mass timber as a safe solution that meets, and in some cases exceeds, stringent fire safety standards for US building design and construction.

In three full-scale fire tests for glulam beam to column connectors, the beam samples were loaded to simulate typical building conditions. The testing is a significant milestone for the US construction industry for a few key reasons:

All connectors passed and achieved at least a 1-hour fire resistance rating (FRR), allowing them to be used in buildings up to 85-feet in height.

The findings allow architects, designers and engineers to specify the tested connection assemblies and satisfy the requirements of the International Building Code (IBC).



Approval by an authority having jurisdiction will therefore be easier for future building projects using mass timber. The tests were carried out to meet ASTM E119-16a 'Standard Test Methods for Fire Tests of Building Construction and Materials', and satisfy requirements of Chapter 7 of the IBC.

reThink Wood represents North America's softwood lumber industry to generate awareness and understanding of wood's advantages in the built environment ([reThinkWood.com](http://reThinkWood.com)).

## BASF coatings from bio-waste

BASF is offering dispersions for the coatings industry that are produced entirely from renewable raw materials. According to Mr. Nikolaus Raupp, Global Sustainability Manager at BASF, there is a growing interest among customers worldwide in sustainable products that are produced from renewable raw materials.

'The renewable raw materials that we use are bio-naphtha and biogas,' he is reported to have told [europeancoatings.com](http://europeancoatings.com), about the new verified biomass balance process. BASF adds the renewable resources at the very beginning of the production chain, obviating the need to build new factories.

The company's Ludwigshafen site (in Germany) covers an area of more than 10 square km with 160 production facilities and a pipeline network of over 2,800 km. "Due to the large number of process steps, only a small proportion of biomass molecules end up in the final product," he notes.

The raw materials themselves meet strict sustainability criteria; they are derived from mostly agricultural and kitchen waste. However, bio-naphtha also contains a certain amount of vegetable oils which are by-products of biodiesel production.

## Caple bringing SawStop to India

SawStop, the US-based private saw manufacturer, will soon have a presence in India, and is expected to launch a range of its table saws during IndiaWood 2018. Mumbai-based Caple Industrial Solutions has signed up to represent the Oregon-based brand in the Indian market.



SawStop table saws feature the unique ability to detect contact with skin and stop the

rotating blade in less than 5 milliseconds. The technology was invented by Dr. Steve Gass in 1999, and the first SawStop table saw was sold in 2004.

SawStop already has a network of more than 350 dealer locations throughout the US, Canada, Japan, South Korea, Taiwan, China, New Zealand and Australia.

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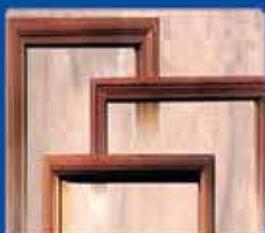


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## Hafele opens 2 'live' showrooms



The international leader in German hardware technologies for furniture, Hafele launched a state-of-the-art design showroom in Chennai in May 2017, to showcase its globally acclaimed innovative solutions and architectural design fittings and accessories.

The showroom, located on College Road in Nungambakkam, was inaugurated by renowned architect, Mr. C.S. Raghuram, Director of C.R. Narayana Rao Consultants, together with Mr. Juergen Wolf, Managing Director of Hafele (South Asia).

The 5,300-square-foot space introduces local

consumers to the "live concept" set up of home interiors. This is Hafele's 7th successive company-owned design flagship showroom in South Asia.

Its 6th such state-of-the-art design showroom was opened on Senapati Bapat Marg, Pune, the same month, which was inaugurated by renowned architect, Mr. Mahesh Nampurkar, Partner in Suman Shilp.

It introduced its new surface range, Dekton, made up of sophisticated raw materials used in glass, porcelain and quartz surface production. It finds applications in flooring, cladding, facades and countertops for both inside and outdoors.

Hafele's Iconic range of luxury home appliances, professional ovens from the Asko series, free-standing refrigerators from Nagold, high-performing cooker hoods from Falmec, automatic sliding door systems, ceiling down-lights, and its newest range of digital door security systems are on live display at these centres.

The digital door security systems are configured to allow various possibilities of safeguarding residential/commercial entrance doors through modern locking technologies like numeric (digital) password security, RFID smart cards or finger-print (biometric) scanning.

The American Hardwood Export Council (AHEC), the leading international trade association for the American hardwood industry, has launched its new website ([www.americanhardwood.org](http://www.americanhardwood.org)) featuring innovative interactive tools designed to put architects and designers in the drivers' seat when it comes to specifying American hardwoods.

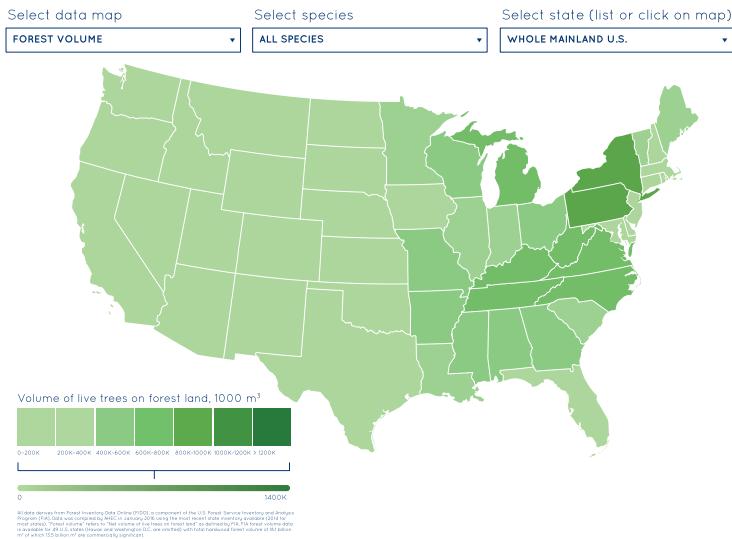
The website's new look has been developed in line with feedback from users and structured to include a new interactive map of the United States' hardwood forests, an updated guide to American hardwood species, a refreshed guide to grading sawn hardwood lumber and an easy-to-use image, video and report library.

For companies trading in American hardwoods, the American Hardwood environmental profile is an online tool that provides environmental impact data such as carbon footprint, forest replenishment time, acidification, and eutrophication for different species, lumber thicknesses and transport scenarios.

## AHEC launches interactive forest sustainability map

### INTERACTIVE FOREST MAP

Our unique, interactive map uses published US Forest Service data to show national and regional distribution, growth and removal information for most of the main commercial American hardwood species.



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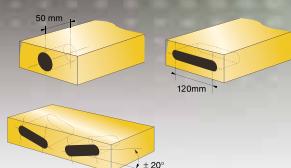
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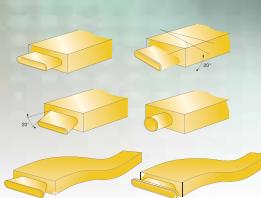
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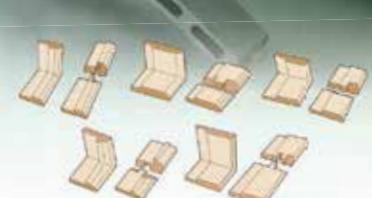
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## New Barberan production line for Kastamonu

Kastamonu Entegre recently placed an order with Barberan for their second high gloss hotcoating line, for its facilities in Turkey. This new line will double Kastamonu's production capacity while adding some new surface finishing features like super matte finish with soft touch effect and anti-fingerprint to its products portfolio. The line is designed to give pigmented products extraordinary durability.

abrasion, scratch and discoloration resistance.

The Barberan installation will be 135 metres long and will reach an output of more than 1400 square metre/hour. Barberan is an 88 year old company that has been delivering the best solutions in coating, printing, drying, profile wrapping, laminating, post-forming, profile sanding and a wide range of complementary machines.

Kastamonu Entegre, a Turkish company and one of the largest in the world, produces raw and melamine coated particle boards, glossy panels, MDF, laminate flooring, tops, door panels and value-added products for the furniture, decoration and construction sectors.



## Aged 85, Cefla posts € 17.7-million profit

Total sales touched 468 million Euro (up 5.5% compared to 2015), with improved profitability leading to net profits of 17.5 million Euro (+9.4%) despite high investment levels throughout the year. Cefla's President, Mr. Gianmaria Balducci, said the company remains as dynamic and future-oriented as ever.

Cefla Finishing and Cefla Plant Solutions also performed very well, confirming their leadership on respective markets. Overall, sales on foreign markets accounted for some 70% of all Cefla Group sales, highlighting the importance of the Imola-based cooperative's international dimension.

The Cefla Group recently celebrated its 85th anniversary with a record-breaking financial statement and sales touching 468 million euro

Turnover up by 5.5%, net profits of 17.5 mln and 1,900 workers (+200 over the

Cefla posted its best-ever results for 2016, its 85th anniversary, exceeding the figures of the record-breaking 2015, confirming an upward trend begun 5 years ago.

AKE Knebel from Germany is a world-renowned manufacturer of superior quality saw blades and cutting tools for wood and non-ferrous material. The company has many path-breaking innovations in the field of cutting technology to its credit.

AKE products are now available in India through Shreepal Trade Impex, a Mumbai-based company with a sales network across India. To ensure that the user gets the same quality performance through-out the working life of the blade/tool, it is essential to have an equally good re-sharpening facility.

To address this vital need, AKE-Shreepal has decided to set up its service centres across India, with the first such centre in Rabale, Navi Mumbai. It is equipped with latest CNC machines and equipment.

## AKE-Shreepal service centres across India

Thorough washing/cleaning of blade by a PLC controlled machine is followed by inspection to ascertain condition using modern techniques and instruments. Re-sharpening on CNC machines ensures minimal removal of material.

The entire refurbishing process is designed in such a way as to ensure that the refurbished saw blade/ cutting tool gives the same quality performance as that of a new one.

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## 9,600 tree species risk extinction

The first ever global database of trees revealed that 9,600 tree species are threatened with extinction and identified a total of 60,065 in existence. Brazil is the country with the most diverse tree population, with 8,715 species, according to the Botanic Gardens Conservation International (BGCI) group.

In total, 58% of trees are so-called single-country endemics, with 2,991 species only found in Madagascar and 2,584 only found in

Australia. After Brazil, Colombia is the second most diverse country, with 5,776 different tree species, followed by Indonesia, with 5,142.

The London-based BGCI, which represents an estimated 2,500 botanic gardens around the world, used data from more than 500 published sources to create the list. The database will be continually updated, as around 2,000 new plants are discovered and described each year.

## Republic of Congo joins PEFC

75 million people. With PAFC-Congo becoming a member of PEFC (Programme for the Endorsement of Forest Certification), it is taking a huge step towards safeguarding the benefits the forests in the region provide.

PAFC is set to help promote sustainable forest management, making it more accessible and inclusive, thanks to its development respecting the local context. It is currently mapping all stakeholders and developing and validating Congo's national sustainable forest management standard.



The forests in the Congo Basin (West Africa) are home to more than 10,000 species, and provide food, water and shelter to more than

## Lighter vehicles from wood?

The global push among car makers to make ever lighter vehicles is leading some auto suppliers in Japan to turn to what seems like an unlikely substitute for steel: wood! Japanese researchers and auto component makers say a material made from wood pulp weighs just one-fifth of steel and can be five times stronger.

The material (cellulose nano-fibres) could become a viable alternative to steel in the decades ahead, they say, although it faces competition from carbon-based materials, and remains a long way from being commercially viable.

Reducing the weight of a vehicle will be critical as manufacturers move to bring electric cars into the mainstream. Batteries are an expensive but vital component, so a

reduction in car weight will mean fewer batteries will be needed to power the vehicle, saving on costs.

Cellulose nano-fibres have been used in a variety of products, ranging from ink to transparent displays, but their potential use in cars has been enabled by the 'Kyoto Process', under which chemically treated wood fibres are kneaded into plastics while simultaneously being broken down into nano-fibres, slashing the cost of production to roughly one-fifth that of other processes.

Scientists and auto parts suppliers are currently developing a prototype car using cellulose nano-fibre-based parts, to be completed in the year 2020. The cost of mass producing a kg of cellulose nano-fibre is currently around \$9.

# Schattdecor to invest €120 million globally

Schattdecor is preparing itself globally for the future by investing about 120 million Euro by the end of 2018 to develop its current locations. Particularly noteworthy is the involvement with the impregnation company, Saintdecor, in Wuhan, China, which will expand the capacity of impregnation currently being done at its sites in Italy, Russia and Brazil.

In the area of printing, Schattdecor US will add a new rotogravure printing press by the end of the year. An additional rotogravure

printing press will be installed in the first quarter of 2018 at its location in Turkey, and two rotogravure printing presses in Shanghai and Quzhou.

In its headquarters in Thansau, Germany, the company will invest in a lab lacquering line for radiation cured lacquer for the foil and lacquer development to support the growing demand for foil surfaces. Schattdecor's production comes from 14 locations in nine countries.

## Siempelkamp to set up rice-straw board plant

CalAg LLC of Willows, California, has commissioned Siempelkamp with the supply of a production plant for fibreboard made of rice straw, estimated to cost US\$ 315 million. The machine technology amounts to an order value of 75 million Euros.

Many years of research and development regarding the use of annual plants for the production of fibreboards provided Siempelkamp with a considerable technological edge which resulted in another major order from the USA.

Rice straw, as raw material, is available in large quantities in North America. The US grows approximately 10,000,000 metric tonnes of rice every year, making it the 20 largest rice producers in the world.

The order includes the complete preparation technology for rice straw bales with bale



twine remover and shredder by Pallmann, as well as a cleaning system for the straw to remove coarse materials and dust. The cleaning system for separating silicate components from the fibres is a design specially developed by Siempelkamp and designed to process rice straw.

The natural-gas fibre dryer designed for a material throughput of up to 32 metric tonnes per hour is supplied by another Siempelkamp subsidiary, Buttner. The core component of the production plant will be a ninth-generation ContiRoll press with its highly efficient Ecodrive.

## Jowat's Mahadevaiah no more

Mr. Revanna Mahadevaiah of Jowat India passed away in a road accident on 10 August, 2017, while on a business tour in Nepal. He was 43 years old. Revanna was a key figure in Jowat India and had immensely contributed in building up the company's business in India and Nepal.



# Jai's hydraulic hot press



Adequate maintenance of the hydraulic hot press machine (single layer) J-120T1 is a crucial factor for its long life and to ensure optimal working conditions.

All the maintenance operations must be done with the machine turned off and wearing protective gloves. The machine and working area must be kept clean from working scraps and anything that could be hamper the working cycle or access to the machine itself.

Make sure that no material not needed by the machine can gather on it thus preventing safe operation and causing danger to the operator.

- Regular cleaning of the machine and, in particular, the platens and cylinders rods are an important safety factor that can prevent correct machine movements and dampen machine efficiency.
- Do not use detergents or lubricants.
- Check whether there is any leakage on the oil cylinder flange and the platen fixing

flange on the cylinder rods are loosened daily, and tightened regularly.

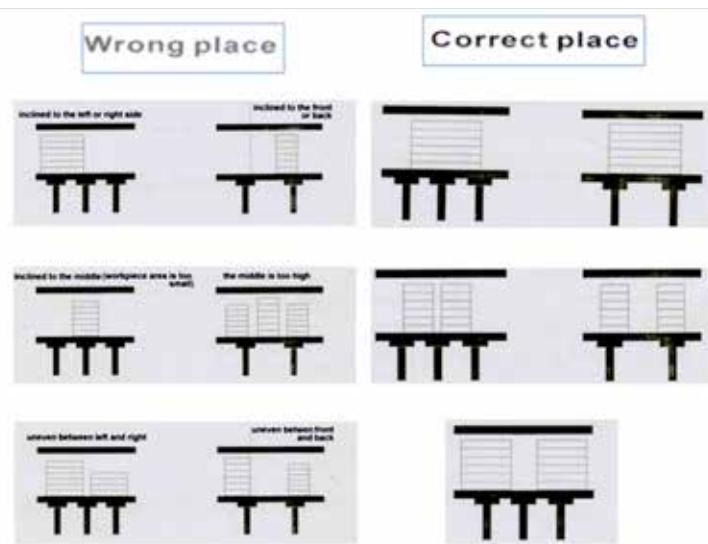
- Check whether there is any leakage on the oil line once a day and examine and repair it regularly.
- Make sure the machine is lubricated regularly.
- Check the electric system safety and the condition of the electric cables. Make sure there are no signs of wear, scrapes, etc.
- Do not press work pieces that are too large or too small for the machine.
- Check the rotation of the oil pump and hot oil pump are correct.
- Check the clamping of the various mechanical components.
- Check the oil level in the tank weekly, and more top up if necessary. If the oil is too dirty, replace it immediately.

Problems	Causes	Remedies
Machine switches off by itself during operation	Power short circuit or tripping operation	Remedy cause of phase failure
	Too hot to shut down the circuits	Adjust the circuits and put the hot relay reset
Work table is not balanced	Displacement between balance tooth of rack and lifting gear wheel	Adjust the mesh
	Oil cylinder flange is loose	Tighten it
Oil leak from any joint	Loose	Tighten it using PTFE tape

Problems	Causes	Remedies
No effect on pressure	Pressure valve or electromagnetic ball is damaged	Change a fitting value
	Oil circuit leakage	Check it
Motor switch ON but press is not ON or the unusual noise from oil pump	Oil pump	Replace with a new pump
Pressure Gauge gets into pressure too fast	Hydraulic control one-way valve or electromagnetic ball is damaged	Change it
Oil raw foam	Inlet link leakage	Tighten or change it
	Liquid level too low	Feed oil to level
	Oil quality wrong	Change oil
Platen swings while lifting	Lifting balancing rack damaged	Replace it
Oil pump gives out heat or shows low pressure in the oil pump	Oil pump is damaged	Repair or replace the oil pump
	There is dirt in the overflow valve	Clean and repair the overflow valve or replace it
Platen cannot keep constant temperature	Temperature controller damaged	Replace it
Platen not lifting while pressing the button	The power is shut down	Switch on
	Problem in power phase	Check it & correct it
	Breaker not connected	Connect it
	Thermal relay or contactor problem	Check it & replace it
	Electromagnetic valve damaged	Check it & replace it
	Pressure gauge problem	Check it & replace it
Intermediate relay is damaged		Check it & replace it

### Dos and don'ts of placing the work piece

Before pressing the work piece, choose the correct placing position according to the actual size and height. Avoid placing or pressing an uneven work piece on the machine as it can cause serious damage.



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## EVENTS CALENDAR

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12-14 October, 2017

Venue: Bombay Convention & Exhibition Centre,  
Mumbai, India

Bringing together the most influential decision makers within the woodworking and furniture industry from across India, the 3rd edition of MumbaiWood is a trade and technology platform for manufacturers and carpenters, as well as architects and real estate developers. The event will allow domestic and global brands to showcase furniture manufacturing and woodworking technologies, raw materials, fittings, accessories and products. More than 250 exhibitors are participating in this international event.

[www.mumbai-wood.com](http://www.mumbai-wood.com)

### WOOD PROCESSING MACHINERY

14-18 October, 2017

Venue: Tuyap Fair Convention and Congress Centre,  
Istanbul, Turkey

Wood Processing Machinery is the most important trade fair of the wood industry in Turkey. It offers an extensive range of products and technical equipment for processing forestry products, semi-finished products, surface finishing, assembly and packaging, and brings together companies that operate in wood processing machinery.

[www.agacmakinesi.com/en](http://www.agacmakinesi.com/en)

### VIETNAM INTERNATIONAL WOODWORKING INDUSTRY FAIR

18-21 October, 2017

Venue: Saigon Exhibition & Convention Centre,  
Ho Chi Minh City, Vietnam

The 12th Vietnam international woodworking industry fair expects exhibitors from over 25 countries and is a platform for entrepreneurs in the industry to discover new business opportunities. The event is supported by many international associations. Vietnam's wood market is expected to increase 8% to 10 %, and there are many opportunities in the industry in the next few years.

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

### WOOD-TEC BRNO

31 October - 03 November, 2017

Venue: Messe Brünn, Brno, Czech Republic

Wood-Tec is an international trade fair for machinery, tools, equipment and materials for the wood industry. Visitors and exhibitors come from all regions of the European Union and from different parts of Central and Eastern Europe.

[www.bvv.cz](http://www.bvv.cz)

### D –CUBE EXHIBITIONS 2017

02-05 November, 2017

Venue: Taj SantaCruz, Mumbai

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

## WOODEX

14-17 November, 2017

Venue: Crocus Expo, Pavilion-1, Moscow, Russia

Woodex is the leading international industry event in Russia where well-known manufacturers and suppliers demonstrate cutting-edge equipment and technologies for woodworking. It features six national stands, including Italy and Germany, and participation from 74 regions of Russia and 43 other countries. It is supported by Eumabois.

[www.woodexpo.ru](http://www.woodexpo.ru)

## Letters to the Editor



As I was assisting in the marketing of a startup construction magazine, I am aware of the difficulties of bringing out such niche publications. *WoodNews* is very informative and I suggest that there be more content relevant to the interiors segment that will help boost circulation.

— Mr. Vinod Kumar

Managing Director,  
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# Gecko's abilities in the spotlight



Adhesive mechanisms in the natural world, as used by geckos when they walk upside down on the ceiling, have many advantages: they are always strongly adhesive, without any glues or residues.

Scientists are researching how these mechanisms can be artificially created. An inter-disciplinary research team from materials science, chemistry and biology at Kiel University (Germany) has now succeeded in developing a nature-inspired adhesive material that can be controlled remotely by using UV light.

This way it is possible to precisely transport objects in a micro-range. The findings could be interesting for applications in the fields of robotics, coatings industry and medical technology. The results were published in the scientific journal, *Science Robotics*.

In nature, mechanical stimuli, such as muscle movements, ensure that animals' legs adhere to surfaces and can be detached again. The scientists are using light to control their artificial adhesive mechanism instead, which they have built inspired by nature.

The advantage of light is that it can be used very precisely. It is reversible, so it can be

switched on and off again quickly.

The scientists first developed an elastic porous material, liquid crystal elastomer (LCE), which bends when illuminated with UV light, on account of its special molecular structure. When doing so, they noticed that the more porous the material, the more it bends.

The researchers made use of this fact. Due to their structures, porous materials can be very easily incorporated to other materials. So the scientists tested what happens when they combined the elastic material, which reacts well to light, with a bio-inspired material that has good adhesive properties.

The result is an intelligent, adhesive composite material that can be controlled with light. The surface consists of mushroom-shaped adhesive microstructures, as can be found on the feet of some species of beetle.

Flat or three-dimensional small elements, such as microscope slides or glass spheres, can attach and be picked up. When the composite material is illuminated with UV light, it bends. Because of the bending of the surface more and more adhesive elements detach from the object, until it can finally be dropped again. (*European-Coatings.com*).

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- 14 Oct 2017 - 10:00 am. to 4:00 pm.

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