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Escalating problems

The wood and furniture industry continues to battle the effects of the Covid-19 pandemic. Upstream product, energy and transportation costs have already spiralled higher in recent months, reaching new record highs in several areas. The war in Ukraine and sanctions on Russia are now exacerbating these issues.

With production activity in Ukraine essentially shut down, restrictions affecting neighbouring Eastern European countries and supply chains in a state of disruption, the already-strained supply situation in individual product areas has rapidly taken a turn for the worse. Insiders report major problems sourcing oak lumber and veneers, large amounts of which have been procured in Ukraine until now. There are also shortages of softwood lumber, particleboard, plywood and certain types of furniture from Ukraine and Belarus. Economic and financial sanctions and mounting bottlenecks in logistics capacity are the primary factors limiting Russian exports. Larch lumber and birch plywood are among the critical products.

Similar problems are evident in the opposite direction. Export restrictions are hampering deliveries of spare and wear parts to Russia, something that will have ramifications for Russian manufacturers' production, at least in some parts. Investment activity will likely slow markedly after a recent period of constant improvement. Projects that have already commenced are under scrutiny, and new projects are being delayed.

Many wood and furniture companies had anticipated that the challenges associated with the pandemic would gradually disperse this year. However, it now looks like it will take longer for business to return to normal in the wake of the direct and indirect effects of the war in Ukraine. Indeed, the situation will likely deteriorate further in a few areas.

This issue of EUWID Special: Wood-Based Panels reflects this tension, as well. Several articles cover the favourable outlook for a variety of industries at the start of the year but would now have to be amended to take account of the war, which had not looked likely at that time. The next special issue, which is planned for September, will provide an update.

I look forward to your feedback and suggestions. You can contact me by emailing aruf@euwid.de.

Yours sincerely **Andreas Ruf** Publisher Machinery 6-16

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The Egger Group signed an investment agreement for a project to modernise its particleboard mill in Shuya, Russia, in November 2021. As with other wood-based panel projects, it remains to be seen whether sanctions on Russia will change these plans. (Photo credit: Egger)

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Homag boosted order intake by almost 60%

Homag Group AG enjoyed a growth of almost 60% in its order intake to €1.742bn (2020: 1.093bn) in the 2021 financial year on the back of persistently strong demand from the furniture industry and a growing trend towards timber home construction. These details are contained in preliminary figures published by its parent company Dürr AG on 24 February. Order intake was also 28% higher than the previous record set in 2017. Its order backlog swelled to €1.002bn (581m) at the year's end. Revenues were 25% higher in a year-onyear comparison at €1.389bn (1.112bn) despite problems sourcing upstream products and parts. Operating EBIT more than tripled to €92.1m (27.0m), with the related margin increasing almost three-fold to 6.6 (2.4) %.

Homag's order intake showed especially strong growth in the first three quarters of 2021 (Q1: €448.1m, Q2: €438.6m, Q3: €503.2m); the fourth quarter was a little weaker with €352.5m. By contrast, revenues gradually improved during the course of the year (Q1: €309.0m, Q2: €348.5m, Q3: €359.0m, Q4: €372.3m). Operating EBIT stood at €25.5m in the fourth quarter (Q1: €13.5m, Q2: €26.1m, Q3: €27.1m).

Dürr AG intends to record another slight growth in all key financials in the current financial year, putting the company back at the pre-crisis level seen in 2019. Order intake should climb to €4.1bn-4.4bn, while revenues are forecast to be in the range of €3.9bn-4.2bn. Dürr has set its sights on an operating EBIT margin of 6.5-7.5% this year. The group expects its Woodworking Machinery and Systems division to book order intake of €1.450bn-1.600bn this year, which would be 8-17% below last year's unusually high level. Revenues are projected to grow again to €1.450bn-1.550bn, with the operating EBIT margin forecast to reach 8.0-9.0%.

To drive further growth. Dürr intends to boost its investments from 2.5-3.5% to 4.0-5.0% of revenues in the coming two years. Homag Group will remain a focus of investment; projects with a total volume of €150m-200m are to be carried out at the firm between now and 2024. Key projects will take place in Schopfloch (new customer centre and logistics centre), Herzebrock-Clarholz (expanded production hall), Holzbronn (new logistics centre), Sroda. Poland (new plant) and, starting in 2024, in Shanghai (new campus). Its new Construction Elements Solutions division is set to undertake projects to expand the site in St. Johann-Lönsingen (production hall expansion) and work at its Danish sites in Odder (new production hall) and Lem (expanded production hall), which were added in takeovers.

HE HOMAG

(Photo credit: EUWID)

Homag Group acquires majority stake in Roomle

Following the end-2020 withdrawal of then minority shareholder Egger Group (St. Johann, Austria), Roomle GmbH (Linz, Austria) has a new owner since October of 2021: Homag Group AG. Homag acquired its shares from Hans Jörg Schelling and Johannes Artmayr, as well as Michael Grabner GmbH and the venture capital funds aws Gründerfonds (Vienna) and OÖ Hightech-Fonds GmbH (Linz). These shareholders had each acquired their stakes in Roomle at different times. The aws Gründerfonds and Michael Grabner GmbH had become shareholders as early as 2014, shortly after the company's founding. Schelling and Artmayr had been involved since May 2018, and in summer 2019 they also acquired half of the aws Gründerfonds stake. OO HightechFonds had been a shareholder since November 2018.

Albert Ortig, founder and CEO of Roomle, retains his stake and remains managing partner. The headquarters, organisation and orientation of the company are to be retained following integration into the Homag Group. The focus will be on the Roomle Rubens Configurator, a tool newly designed in the fourth quarter of 2020 which is available in four levels and can be used to digitally display and configure products. At the highest level, the furniture design created with the configurator can be transferred directly into the production process of the carpentry/joinery company via an interface in the planning software and/ or production software. With this interface. and the resulting connection to the existing production software, the Homag Group intends to expand its software offer to include concepts for online sales of furniture.

Egger acquired a 9% stake in Roomle at the beginning of July 2019. In parallel, both companies had founded the joint venture Furniture eServices GmbH which, as a sales company, was to distribute software, with which end customers could configure furniture online, to carpentry/joinery companies as well as companies in the timber trade via a licence model. However, this joint venture had then been dissolved due to differing ideas; Egger simultaneously sold its Roomle shares back to Ortig.

Biesse's sales revenue to rise by roughly 10% p.a.

The Italian plant and machine manufacturer Biesse S.p.A. is aiming to restore its consolidated sales revenue to the 2018 level by its business year 2023. At that time, the company had generated sales revenue totalling €740m. In the last two years (2019: €706m, 2020: €579m), the company had fallen considerably short of this figure. According to the "Business Plan 2021-2023" published in August 2021, continuous growth is to be achieved in the next few years. Here, Biesse is striving for a compound annual growth rate of (CAGR) of 8-12%. From the basis of the level of sales revenue reached in the last business year, the target corridor for the business year 2023 is relatively wide at €730-810m.

Parallel to this, the key performance figures are to be raised significantly as well. Unlike sales revenue, in the latest publication, however, Biesse is not assuming that it will be able to repeat the figures achieved in 2018 (EBITDA: €93m, EBIT: €64m) even if development is favourable. From the basis of the €56m recorded for the business year 2020, EBITDA is

to be raised to €65-90m, giving a CAGR of 5-17%. At 9-11%, the target corridor for the EBITDA margin is also below the 12.5% recorded for 2018. Based on a low reference figure (€6m), Biesse is striving for considerably greater growth for EBIT. Sights have been set on €29-49m in the business year 2023 along with an EBIT margin of 4-6%. In the event of favourable development, this will result in EBIT doubling every year, reaching a CAGR of around 70% even in the unfavourable case described in the present forecast.

According to the latest business plan, Biesse wants to expand its product range, particularly in systems for processing glass as well as mineral and composite materials. In connection with this, Biesse signed an agreement on 11 October for acquiring all the shares in Forvet Costruzione Macchine Speciali S.p.A. of Volvera, a company geared to systems for processing glass. This takeover extends Biesse's product range in the glass processing segment previously covered by its "Intermac" brand. The deal is scheduled to reach completion before the end of the current business year. Biesse savs it will rely mainly on available cash resources for paying the purchase price of €41m.

SCM, Randek to cooperate in timber construction

The plant and machine manufacturer SCM Group S.p.A. and the plant constructor Randek AB of Falkenberg, Sweden, have agreed on a cooperation in worldwide delivery of production systems for timber construction. The aim of the agreement announced at the end of December 2021 is to act jointly as full service providers. The range of products will cover machinery for processing and producing wall and timber-frame construction structures and for processing cross-laminated timber (CLT) elements. A strategic partnership is then to be built up in the medium term, the product range extended, and the production capacity as well as the degree of specialisation of both companies enlarged. In this context, a joint business model is also being examined. Further details have not yet been given, however.

SCM's products in the "Wood" division include CNC and gantry-type machining centres. Only recently, at the beginning of 2021, SCM had added the "Area XL" CNC machining centre to its range for processing cross-laminated timber (CLT) elements. Randek is also known as a supplier of wall/ceiling production lines as well as turning tables for the prefabricated house industry. The company also offers extensive robotics systems.

The first joint project is an order from an undisclosed customer for a production plant for manufacturing modules made with wooden and steel frames involving the use of a robot assisted steel frame system (LGS). Robert Bosch GmbH Engineering and Production Service of Stuttgart was involved in planning the project and selecting the suppliers.

Raute's order intake topped €200m in 2021

Raute Oyj raised its order intake by more than two thirds to €203m (2020: 119m) in 2021 compared to a relatively low baseline in 2020. The order backlog reached €158m at the end of the year (94m). Raute reported that both key figures reached new record highs last year.

After a slow first quarter (+20% to €30m), order intake soared five-fold in the second quarter (€65m) and third quarter (€58m). Along with the low baseline, three large orders also helped to boost order intake. No additional complete plant projects were finalised in the fourth quarter, but total order intake remained high at €50m (70m) thanks to new orders for individual product lines. Some €36m (58m) of this sum was attributable to business with new lines and €14m (12m) to technology services.

Raute raised its revenues by 24% to €142.2m (115.0m) in the past financial year. Revenues in what remains its leading sales market, Russia, edged 10% higher to €69.8m (63.4m). Europe (+37% to €34.9m), North America (+63% to €20.1m) and the Asia-Pacific region (+58% to €20.1m) all booked much stronger growth in revenues, albeit from much lower baselines. Latin American revenues showed a moderate increase of 3% to €7.8m (7.6m).

A change in IFRS accounting rules in April was among the factors that had a negative impact on earnings. What is more, delayed deliveries of raw materials and components, higher material costs than the previous year and ongoing Covid-related restrictions at plants in China and North America also took a bite out of earnings. As reported when preliminary figures were released at the end of January, Raute posted an operating loss of -€2.2m (-2.8m) for the period. Raute retroactively booked charges of €0.9m for 2020 in the latest annual report due to the changed accounting rules. An operating loss of €1.9m had originally been reported for the 2020 financial year. Raute also retroactively adjusted its pretax and net losses to -€1.8m (-2.5m) and -€1.8m (-1.8m), respectively.

Holtec to supply woodyard to VMG's LVL plant



Woodyard installation

(Photo credit: Holtec)

Following the order completed through Dieffenbacher GmbH Maschinen- und Anlagenbau for the THDF thinboard works planned by UAB Homanit Lietuva at its Pagirai facility in Lithuania, Holtec GmbH & Co. KG has received another order from the Baltic wood-based panel industry. UAB Vakaru Medienos Grupe (VMG) of Klaipeda, Lithuania, had placed an order for the whole roundwood handling system for the addition of an LVL plant to the Akmene particleboard works that was put into service in summer 2020. The contract, which had already been agreed in principle in May and fixed in August, includes the debarker, the roundwood sorting system, a "SmartCon" roundwood conditioning plant, the crosscutting station, and the feeder into the peeling systems supplied by Raute Oyj. Holtec is also integrating into its package plant and machinery from the sub-suppliers Va-Ion Kone Oyj, Ness Wärmetechnik GmbH, and Sennebogen Maschinenfabrik GmbH. Raute had received the contract to supply the whole plant in May. The order, worth a total of approximately €30m, covers all of the main sections from veneer production through to a 6 ft by 25 m press geared to an annual capacity of 125,000 m³.

Holtec had already received two major orders from LVL and plywood manufacturers in Poland and Belarus in the last few years. A SmartCon conditioning system was also used in these projects by Steico SE of Feldkirchen, Germany, at the Polish facility in Czarna Woda and by the Kronospan Group in Smorgon, Belarus, in which the roundwood is sprayed with hot water in a 80-100 m long tunnel. The new LVL woodyard is also the third order that Holtec has received from VMG. Holtec had previously supplied woodyard systems for the VMG plywood works in Klaipeda, Lithuania, and in Mogilev, Belarus.

Holtec had first installed the SmartCon conditioning system, now also earmarked for the VMG project, at the Romanian Radauti OSB works of the Egger group of St. Johann, Austria; the works was put into operation in 2012. Further reference projects in the OSB sector are the Kronospan works in Mogilev, Belarus, and in Ufa, Russia, as well as the OSB works put into operation by Modern Lumber Technologies LLC (MLT) at its Russian facility in Torzhok, Tver oblast, in July 2016. The SmartCon system is also going to be used for Swiss Krono Group's OSB project at its Russian works in Scharya, Kostroma oblast.

Andritz delivering refiner for new Gutex facility

Gutex Holzfaserplattenwerk H. Henselmann GmbH & Co. KG, based in Waldshut-Tiengen, Germany, has ordered the complete front end for fibre preparation from Andritz AG for an insulating board plant that it is planning in the Breisgau industrial park near Eschbach. The order, placed in the third quarter of 2021, includes a lumberyard with RotaBarker debarking technology, an HHQ chipper with a horizontal feeder, a fully automated chip store with silo discharge and sorting machines, an S 1050M refiner with a C-Feeder, a steam recovery sys-

tem, and the steel structure and pipework. Technology will be delivered during the second half of 2022, with commissioning scheduled for the second quarter of 2023. Gutex placed its first refiner contract with Andritz in spring 2019. This project at the company's headquarters in Waldshut-Tiengen also involved an S 1050M refiner with a C-Feeder.

In the spring and late summer, Andritz sold two 44-1CP refiners to Naturheld GmbH, a company founded by Ziegler Holding GmbH, based in Plößberg, Germany, for its insulation board project in Grafenwöhr.

Kadant sold ten stranders in North America in 2021

In business year 2021, Kadant Carmanah Design of Surrey/British Columbia has sold a total of ten stranders in North America. Six thereof will be installed at new OSB plants. These six stranders are in turn part of three orders. The remaining four stranders are designated for replacement and expansion investments. The buyers are Wawa OSB Inc. (Wawa/Ontario), Huber Engineered Woods LLC (HEW, Charlotte/North Carolina), Corrigan OSB LLC (Corrigan/Texas), Georgia-Pacific Wood Products LLC (Atlanta/Georgia) and another yet unnamed OSB producer.

Dieffenbacher forecasting strong growth in revenues

Dieffenbacher GmbH Maschinen- und Anlagenbau intends to boost its revenues to around €450m in 2022 in the wake of good order intake in recent months. Preliminary figures show that the company remained just under the €400m mark in 2021, exceeding a target set at the start of the year to record similar revenues to 2019.

The wood-based panel line business rose sharply again last year. The range of products offered by Dieffenbacher's Recycling business unit has been diversified to include plastics recycling in recent months. The Dieffenbacher Group also re-entered the metalworking business at the end of 2020. The Composites business unit, which had previously focused primarily on plastics converting, became part of the new Forming business unit as a result. These measures intend to gradually bring Dieffenbacher Group's revenues back towards €500m in the coming years.



Headquarter in Eppingen

(Photo credit: Dieffenbacher)

Siempelkamp to deliver MDF line to Greenply



Main site in Krefeld

(Photo credit: Siembelkamb)

The Indian plywood manufacturer Greenply Industries Ltd, based in Tinsukia, Assam, ordered the main technology for an MDF/HDF line that it is planning in Shepura, Gujarat, during the fourth quarter of 2021. The forming and press line will come from Siempelkamp Maschinen- und Anlagenbau GmbH. Andritz AG will deliver the pressurised refining system. Anthon GmbH Maschinen- und Anlagenbau is to supply the sanding and cutting line

The orders were placed by Baahu Panels Pvt. Ltd., a company based in Kolkata, West Bengal, that Greenply acquired in August. This firm had already developed an MDF/HDF project for the site in the district of Vadodara prior to its acquisition. According to a Siempelkamp press release, the technology that the Indian firm has ordered will make board 1.5-35 mm thick, primarily out of eucalyptus.

The new order marks the first time that Siempelkamp will deliver a production

line to Greenply. Dieffenbacher GmbH Maschinen- und Anlagenbau had deliered the main components for previous projects. A mill in Pantnagar, Uttarakhand, that was commissioned in 2010 has a designed annual capacity of 180,000 m³ with a 28 m-long continuous press. Commissioned in April 2018, the second mill in Routhu Suramala, Andhra Pradesh, has an annual capacity of 360,000 m³ using a 56 m continuous press. Greenply's MDF division, which was founded in 2010, was transferred to a dedicated company Greenpanel Industries Ltd, based in Tinsukia, Assam, in mid-July 2019 and has recently started preliminary planning work for a third MDF mill.

In India, Siempelkamp recently delivered a complete line to the laminate and wood-based panel manufacturer Rushil Decor Ltd, based in Ahmedabad, Gujarat. Equipped with an 8 ft x 28.8 m ContiRoll, this line has a designed annual capacity of 240,000 m³ and was commissioned in Atchutapuram, Andhra Pradesh, at the beginning of 2021. Dieffenbacher had landed an order from the Indian plywood and laminate manufacturer Merino Industries Ltd, based in Kolkata, West Bengal, to deliver a particleboard line in the first quarter. This production line, which will have an annual capacity of 270,000 m3 with an 8 ft-wide CPS+, is slated to start operating by the end of 2022.

Anthon lands another order from India

The machinery and plant manufacturer Anthon GmbH Maschinen- und Anlagenbau is poised to deliver a sanding and custom cutting line for a new thin MDF/HDF mill in Sherpura, which is around 50 km south-west of the west Indian city of Vadodara in Gujarat Province. The customer is the Indian plywood manufacturer Greenply Industries Ltd., based in Tinsukia, Assam. The contract was awarded by Greenply's project firm Baahu Panels Pvt. Ltd., based in Kolkata, West Bengal.

Assembly work is scheduled for the third quarter of 2022.

Greenply also recently placed an order with Andritz AG for a pressurised refining system. Siempelkamp Maschinen- und Anlagenbau GmbH will deliver the forming and press line. Just over the summer, Anthon just won the contract to deliver a sanding and custom cutting line for a particleboard mill that the plywood and laminate manufacturer Merino Industries Ltd., based in Kolkata, West Bengal, will use in a particleboard mill planned in Halol, Gujarat.

Egger plant to receive Vits' 1000th treater

Vits Technology GmbH, a company belonging to Deurotech Group GmbH (DTG), is to install its thousandth impregnation system at Egger Kunststoffe GmbH & Co. KG (Gifhorn). Vits supplied its first impregnation system to a Brazilian company in 1957. The systems that have been manufactured and installed worldwide since then are mainly used to produce melamine films; to a lesser extent, phenol films and finish foils (post-impregnates) are also produced.

Besides Vits, other Deurotech companies are also involved in the contract awarded by the Egger Group (St. Johann, Austria) in April 2021 for the laminate plant in Gifhorn. In addition to the 2,900 mm wide phenolic treater, Vits will also supply roll handling and packaging elements, for example. Impregnation is conducted on a roll-to-roll basis; prior to winding, the phenol films can still be divided by an online centre cut. After packaging, the phenol film rolls are placed on transport pallets with the help of a robot before being fed to the high-bay warehouse via an automatic transport system.

IFA Technology GmbH, Rain (Lech), is to supply the complete raw material tank depot with truck emptying station, as well as the gravimetric resin dosing system with integrated residue recycling. An afterburning system (regenerative thermal oxidation RTO) from Airprotech s.r.l. (Magenta, Italy) is to be installed for waste air purification. Wessel-Umwelttechnik GmbH (Hamburg) will provide waste air equipment in the phenol treater and the pipework. Two heat exchangers will be integrated for energy recovery; the thermal energy obtained is to be used for purposes such as preheating the dryer supply air, providing warmth to the heating roller and the impregnation trough, as well as for heating the buildings.

Vits is responsible for overall project management. According to the current schedule, the individual systems are to be delivered from March 2022 onwards; commissioning is to follow in June. The new phenol treater will be the 22nd impregnation system from Vits in the Egger Group.

Order intake up 76% year-on-year in the first 11 months

German machinery manufacturers set a new production record of €3.45bn

Solid business since the second half of 2020 has paved the way for German woodworking machinery and equipment manufacturers to record unprecedented growth in order intake and production.

The figures available to date show that order intake increased by 76% in the first 11 months of last year compared to the same period in 2020. According to the Woodworking Machinery Association within the German Engineering Federation (VDMA), based in Frankfurt, Germany, order volumes were even higher than the old record set in 2018.

The primary woodworking sector still performed slightly better than the secondary sector in terms of order intake. These minor differences are mainly the result of mixed trends in 2020. The pandemic compounded a dive in order intake for large-scale technology, for instance to make wood-based panels, caused by an economic downswing during 2019. By contrast, sales of standard machines to companies in the furniture industry, the building part

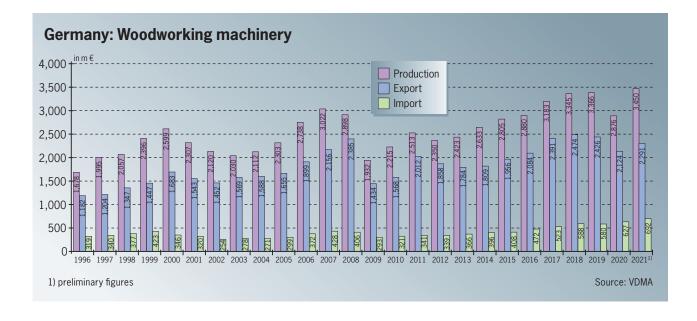
industry and the trades held up better at that time.

In the view of the Woodworking Machinery Association within the VDMA, order intake increased sharply in both segments in 2021 thanks to the general improvement in the economy and a variety of special effects. Numerous customers had slashed investment activity and postponed planned projects shortly after the outbreak of the pandemic. Many of these projects have been revived in recent months amidst a significant improvement in earnings in many parts of the wood and furniture industry since the end of 2020.

Economic stimulus initiatives launched in several countries to build back from the pandemic, for instance, including tax concessions and special depreciation options, made it easier to finance these projects. Exceptional booms have also emerged in specific sales markets, market segments and product areas. The number of projects involving building parts production, cross-laminated timber and wood-fibre insulation materials has increased significantly, as efforts to sup-

port timber construction have continued. Echoing tendencies already seen in the furniture industry, the door and window production business is seeing trends towards customised manufacturing, further driving investment activity triggered by the persistently strong building sector. The number of projects in the flooring sector is also increasing again as the addition of design flooring capacity is now being pushed in North America and Europe.

After enjoying an unusually strong upturn last year, German machinery and plant manufacturers will likely see order intake gradually return to normal levels in the coming months. It may also fall below some areas' relatively high levels recorded in 2021. On the whole, though, the association expects to see a positive trend again this year. Many factories already have enough orders on hand to keep busy for much of 2022, given the cushions that have built up since the second half of 2020. A number of companies have already scheduled delivery dates in 2023; a few customers have to plan for even longer lead times.



The Woodworking Machinery Association within the VDMA now thinks that production volumes grew by 20% to around €3.45bn in 2021, even surpassing a forecast upgraded in spring 2021. In November 2020, the Woodworking Machinery Association within the VDMA association initially set a target of 3% growth to around €2.95bn for 2021 and confirmed this rather moderate forecast in February. Following an unexpectedly strong first-quarter performance, a 15% improvement to around €3.3bn had been thought possible for the full year. At that time, though, the association had seen risks for the future in the form of shorttime work, which some companies kept going in the spring, at least in some areas, disruption to the worldwide supply chains, the resulting problems sourcing a few parts and the fact that sales contacts, assembly and installation assignments were still hampered by ongoing travel restrictions. These risks still exist, and concerns have even intensified in some areas, such as the strained supply of parts, factories working at high capacity utilisation and the likelihood that the shortage of skilled workers will intensify. In light of this situation, the Woodworking Machinery Association within the VDMA has issued what it considers a rather conservative production forecast of +5% to €3.62bn for this year.

The Woodworking Machinery Association within the VDMA bases its estimates of how production has evolved on data from the German Federal Statistical Office in Wiesbaden, which only have been published until the end of September for the past year. German woodworking machinery manufacturers had raised their output by 15% in the first quarter compared to the same period in 2020. The second quarter continued in a similar track (+14%), while the third quarter saw a 19% improvement. Looking at the first nine months combined, production volumes were 16% higher.

By contrast, all four quarters of 2020 suffered losses compared to the previous year. First-quarter output had been down 9%, while the second and third quarters were each almost 20% weaker than the prior-year periods. The German Fede-

ral Statistical Office found that fourth-quarter production volumes declined by nearly 10%. The value of this production dropped by 14.5% to €2.876bn in 2020. Much higher production values had been registered in 2018 (€3.345bn) and 2019 (€3.366bn), but these figures were still below the latest estimate for 2021. Exports were down 13.9% at €2.089bn in 2020 (2019: €2.426bn), while imports continued to grow, rising by 4.9% to €608m (€580m) despite the Covid-19 pandemic.

The latest data from the Federal Statistical Office showed that exports rose

by 3.9% to €2.006bn in the first 11 months of last year. Deliveries to the EU-27 increased by 6.5% to €896.8m. Shipments to the rest of Europe (+16.8% to €327.5m) and North America (+21.0% to €252.9m) grew at even stronger rates. Exports to the Far East tumbled by 21.7% to €293.0m. German woodworking machinery imports climbed by 8.6% to €619.9m in the first 11 months of 2021. At €333.6m, imports from the EU-27 were 1.2% above the prior year's level; however, deliveries from the rest of Europe were down 16.8% at €34.7m. Imports from the Far East climbed 27.2% to €241.1m.



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Markets in East Asia, South-East Asia and South America headed in the other direction

German woodworking machinery and plant exports rose by almost 8% in 2021

After falling slightly in 2019 and sharply in 2020, German woodworking machinery and plant exports rebounded by 7.9% last year.

According to full-year figures from the German Federal Statistical Office, based in Wiesbaden, Germany, that have been now released, exports reached €2.291bn (2020: €2.124bn) in 2021. The export business had been even stronger from 2017 to 2019, setting a record of €2.473bn in 2018 before dipping by 1.9% to €2.426bn in 2019. The economic downturn that emerged during 2019, combined with the effects of the Covid-19 pandemic, then led to a double-digit decline of 12.4% in 2020.

An analysis carried out by the Woodworking Machinery Association within the German Engineering Federation (VDMA) showed that business with East Asia weakened significantly last year after bucking the trend and rising in 2020. These exports were 22.8% lower than in 2020 at €310.1m (401.5m). Shipments were also below the levels recorded in prior years. Deliveries to South-East

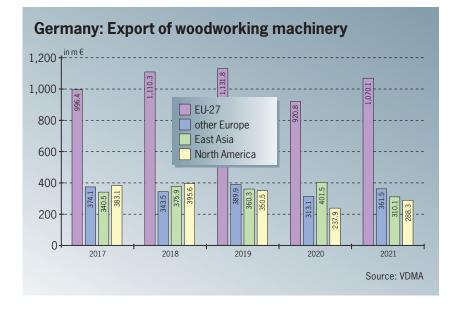
Asia fell even more sharply, tumbling by 62.3% to €23.9m (63.4m). On the other hand, shipments to Central and South Asia leapt by 46.4% to €17.5m (12.0m). The single-largest markets in Asia were China (-17.7% to €258.3m), Japan (-59.7% to €17.9m), Taiwan (+122.5% to €17.0m) and India (+50.1% to €12.8m). The Association reported steep drops in deliveries to South Korea (-61.5% to €10.8m), Thailand (-69.5% to €8.2m) and Vietnam (-85.9% to €4.4m), while Indonesia (+566.1% to €5.8m) gained a little ground.

Following strong growth in 2020, South America saw shipments recede to roughly the average level recorded from 2017 to 2019 with a 32.6% downturn to \in 47.9m (71.1m). Exports to Brazil dwindled by 40.2% to \in 27.4m (45.8m), while Chile, the second-largest market, held up a little better with a 25.9% dive to \in 10.2m (13.8m).

German manufacturers achieved doubledigit growth in all other relevant regions. Deliveries to the EU-27 again exceeded the €1bn mark on the back of a 16.2% growth to €1.070bn (920.8m); the statistics showed very strong increases in deliveries to Austria (+23.9%), Italy (+43.6%), the Netherlands (+29.6%), Belgium (+45.2%), Lithuania (+22.4%), Romania (+56.2%) and Portugal (+93.0%). The VDMA analysis indicated that exports to the rest of Europe were 15.5% higher at €361.5m (313.5m). The three largest markets UK (+19.0% to €87.7m), Russia (+15.2% to €68.4m) and Turkey (+13.8% to €68.1m) all recorded comparable increases. Switzerland remained just shy of 2020's level. Exports to Ukraine were up 38.8% at €24.2m (17.5m).

Germany had exported much less woodworking machinery and plants to North America than in previous years in 2020, but these shipments recovered last year with a 21.2% upturn to €288.3m (237.9m). Higher deliveries to the US (+27.7% to €257.3m) coincided with another slump in Canada (-15.0% to €31.0m). Exports to Australia climbed by 28.4% to €28.8m; the data showed a 32.9% improvement to €37.6m in the Australia/Oceania region.

These diverging trends meant that 46.7 (43.4) % of total German woodworking machinery exports ended up the EU-27 last year. The rest of Europe accounted for 15.8 (14.7) %. East Asia was responsible for 13.5 (18.9) % and North America for 12.6 (11.2) %. China remained the single-largest market with a share of 11.3%, even though deliveries declined in a year-on-year comparison. The US was almost at the same level; its share of total imports reached 11.2%. Austria (7.5%), Poland (5.8%), France (5.7%), Italy (4.2%), the UK (3.8%), Egypt (3.7%) and the Netherlands (3.6%) followed in their footsteps. Russia took tenth place with a share of 3.0%. These ten markets combined received 48.5 % of Germany's total exports last year.





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Machinery and Plant Engineering division sold 13 partial or complete lines

Siempelkamp set new order intake record in 2021 financial year

The Siempelkamp Group sold a total of 24 large-scale plants via its Machinery and Plant Engineering, Recycling/Container Technology and Casting Technology divisions in the 2021 financial year.

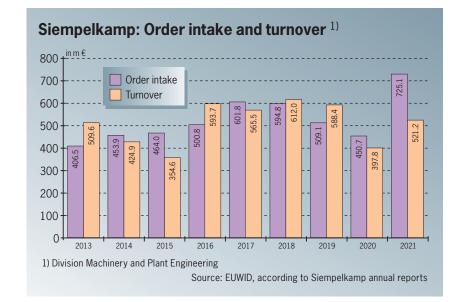
Group-wide order intake was 54.7% higher than the previous year at €855.0m. This figure also surpassed the previous record set in 2007 (€815.7m). Order intake had been in the region of €800m in 2008 (€798.5m) and in 2010 (€807.7m), too. The global financial crisis in 2009 had sent order intake plunging to €329.8m. Siempelkamp's group order intake had then hovered between €588.9m (2013) and €721.4m (2017) from 2011 to 2017. The subsequent slight downswing was intensified by the impacts of the Covid-19 pandemic in 2020. In that year, order intake fell to its lowest level since the crisis-ridden year of 2009 at €552.7m.

Its much better performance of late also helped the group to set a new record in terms of its order backlog with €863.8m (2020: 630.1m) at the end of 2021. The order cushion had last topped €800m

from 2013 to 2015. The processing of orders on hand gradually returned to normal last year, too, although a few markets continued to face Covid-related restrictions. Preliminary information indicates that Siempelkamp raised its revenues by 29.1% to \in 621.8m (481.8m) in 2021. This growth largely offset a 28.3% drop recorded in 2020. Siempelkamp had generated revenues of \in 672.4m in the 2019 financial year.

The Machinery and Plant Engineering division fared a little better than the group as a whole last year. Altogether, it sold 13 partial or complete lines to make wood-based panels and booked several rebuilding and press extension projects. The metal forming and composite presses business also picked up, with Siempelkamp booking three orders for metal forming presses. Altogether, this division improved its order intake by 60.0% compared with the previous year to €725.1m (450.7m). Its order backlog reached €769.2m (565.3m) at the end of 2021. The Machinery and Plant Engineering division hoisted its revenues by 31.0% to €521.2m (397.8m) last year, which was just shy of the figure recorded in 2019 (€588.4m). By contrast, the division fared much better than in 2019 when it came to its order intake (€509.1m) and order backlog (€520.1m). Siempelkamp's Recycling/Container Technology and Casting Technology divisions experienced less change in their financials over the past three financial years. These two areas were less affected by the pandemic than machinery and plant engineering.

Siempelkamp has so far only published some information about last year's orders from the wood-based panel industry. Turkey was its single-largest market with four orders. Starwood Orman Ürünleri Sanayi A.S., headquartered in Inegöl, had ordered a thin MDF/HDF line back in January. Orders placed by Küpeliler Endustri A.S., based in Eskisehir, to modernise its particleboard and OSB production technology followed in the second quarter. In July, Kastamonu Entegre Agac San. ve Tic. A.S., based in Istanbul, awarded the firm a contract to deliver an MDF/HDF line to expand its Balikesir particleboard mill. Incoming orders in the second half of the year included one MDF/HDF line each for the Indian group Greenply Industries Ltd., based in Tinsukia, Assam, and the South African firm PG Bison Ltd., headquartered in Johannesburg. Unconfirmed reports suggest that Kronospan has ordered a particleboard line and a thin MDF/HDF line for projects in Spain and Russia. Swiss Krono Group tasked Siempelkamp with extending a continuous press at its OSB mill in Vásárosnaményi, Hungary. Homann Holzwerkstoffe GmbH, based in Munich, was sourcing a forming and press line for a replacement project planned by Homanit GmbH & Co. KG in Losheim from Siempelkamp, too. Based on the current order intake, Siempelkamp has enough orders on hand to keep its machinery and plant engineering capacity busy until the end of 2023.



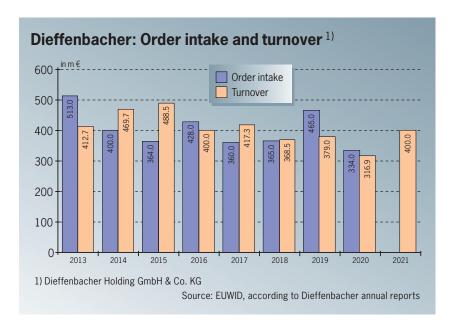
Some 18 partial or complete lines to make wood-based panels sold in 2021

With orders on hand, Dieffenbacher is running at capacity well into 2023

Dieffenbacher GmbH Maschinen- und Anlagenbau sold 18 partial or complete lines to make wood-based panels during the 2021 financial year.

Eleven of these orders were assigned to its Eppingen headquarters and seven to Shanghai Wood-Based Panels Machinery Co. Ltd. (SWPM), a Chinese firm in which Dieffenbacher holds a majority stake. During the first quarter of 2021, Dieffenbacher had already received five orders for its plant in Eppingen: two insulating board lines for Gutex Holzfaserplattenwerk H. Henselmann GmbH & Co. KG (Waldshut-Tiengen, Germany) and Ziegler Holding GmbH (Plößberg, Germany), an MDF/HDF line for Starwood Orman Ürünleri Sanayi A.S. (Inegöl, Turkey), a particleboard line for the Indian firm Merino Industries Ltd. (Kolkata, West Bengal) and a multi-opening OSB line for the Roy O. Martin Lumber Management Co. LLC subsidiary Corrigan OSB LLC (Corrigan, Texas). SWPM finalised three orders in the same period, covering two MDF/HDF lines and a line for a new wood-based panel product. These eight orders altogether meant that Dieffenbacher Group had already registered incoming orders valued at €164m by the end of March, representing around half of its order intake in all 12 months of 2020.

Dieffenbacher Eppingen landed six more orders and SWPM won four more projects later on in 2021. Swiss Krono Group gave the green light for an OSB project at its site in Sharya in Russia's Kostroma oblast in April. Over the summer, it booked an order from the Chinese group Wanhua Ecoboard Co. Ltd. for two more super particleboard (Super PB) lines, which will bring the total number of lines delivered to this company to ten. Another Chinese company placed an order for a fine OSB line. The US group GO Lab LLC, based in Belfast, Maine, tasked Dieffenbacher with providing an insulating board line, which



will combine different pieces of secondhand technology from the Homatherm mill in Berga, which Homanit Building Materials GmbH & Co. KG closed at the end of 2018, with new components. The company also recorded another order about which no information has been disclosed to date. The seven orders secured by SWPM during the year comprise two particleboard lines, three MDF lines, one HDF line and a line for a new type of board. Five of these lines will be installed in China, and two will be delivered to India.

Dieffenbacher already sold another four lines in January 2022. The Vietnamese company Kim Tin Group, headquartered in Ho-Chi-Minh City, has ordered two almost identical MDF/HDF lines that are to be installed and commissioned in rapid succession. The Indian firm Greenlam Industries Ltd., based in New Delhi, wants to make its first foray into particleboard manufacturing using a line ordered from Dieffenbacher. The fourth order is reportedly for an MDF/HDF line. With project activity at a high level for quite some time now, Dieffenba-

cher expects to land a larger number of additional orders in the months ahead, although Russia's invasion of Ukraine will likely put the dampers on business with Eastern Europe and Russia. Based on the current backlog of orders, Dieffenbacher can now keep its facilities making woodbased panel systems running at capacity well into 2023. Some buyers have already switched to planning their projects farther ahead and reserving manufacturing slots in the light of these long lead times.

Dieffenbacher had sold 14 partial and complete lines to make wood-based panels in the 2020 financial year, eight of which were handled by its Eppingen headquarters and six by SWPM. After recording its first orders at the start of the year, the group experienced a period of weakness lasting several months after the outbreak of the pandemic. Order intake then staged a strong recovery towards the year's end. An order placed by UAB Homanit Lietuva in mid-December 2020 for a thin board line for a new mill planned in Pagirai, Lithuania, marked the definitive turnaround.

Lead times for high-performance systems from Herford become much longer

Wemböner has delivered several presses from its Changzhou plant to Europe

After landing its first orders from customers in Turkey, Wemhöner Surface Technologies GmbH & Co. KG has now delivered several short-cycle presses made at Wemhöner (Changzhou) Machinery Manufacturing Co. Ltd., based in Changzhou, Jiangsu Province, to other European countries, too.

Unconfirmed reports suggest that Kronospan installed one press made at Wemhöner's location in China at its Lampertswalde mill and another in Veliko Tarnovo, Bulgaria, last year. Another project was carried out at a Greek company. Wemhöner had reportedly also received several enquiries from Eastern Europe and Russia in the recent past. With eight presses ordered, some of which have already been delivered, the Turkish group Starwood Orman Ürünleri Sanavi A.S., based in Inegöl, is so far its biggest customer for short-cycle presses made in China. This company had initially ordered two double-format presses during 2017; orders for six additional smaller presses followed in September and November 2020.

Wemhöner feels that the less complex short-cycle presses made in Changzhou complement the high-performance presses that it makes in Herford. Lead times for these more sophisticated presses have now become relatively long in the wake of the strong economic recovery that has emerged since mid-2020. Based on its current order cushion, the firm has enough orders to keep its manufacturing capacity largely busy until the end of 2024. Recent developments in Ukraine and Russia might lead to a change in the situation, though, as Eastern Europe's and Russia's share of Wemhöner's overall order intake has risen sharply in the past two years. Several of the presses ordered for these regions are already in the manufacturing process, so these orders cannot be halted. Restrictions that have already emerged for haulage to Eastern Europe and Russia might also lead to assembly and commissioning delays.

According to an annual report published in early March, 2019 was a fairly slow year for Wemhöner Surface Technologies. Order intake had plunged by 64% compared

with a relatively high baseline one year earlier. More than half its full-year business volume was not booked until December 2019. However, orders on hand from the previous year helped the company to keep its plants running throughout 2020, too. A recovery that surfaced from mid-2020 onwards intensified during the past year and persisted into the first quarter of 2022. Major wood-based panel manufacturers, in particular, have ordered bundles of several short-cycle presses so that they can bring projects planned in the medium term to fruition, too. Wemhöner typically does not comment on individual orders. Unconfirmed reports from market players suggest that Kronospan ordered eight short-cycle presses from Herford at the beginning of 2021; a follow-up order for six more presses has reportedly been placed now. This technology will be delivered over a period of several years. Egger (St. Johann, Austria), Unilin bvba (Wielsbeke, Belgium) and Kastamonu Entegre Agac San. ve Tic. A.S. (Istanbul, Turkey) are said to have bundled orders, too.

The preliminary information available to date suggests that Wemhöner Surface Technologies saw its revenues slip back to €90m in the 2021 financial year after slightly topping the €100m mark in the three previous years. High capacity utilisation connected to its order intake was listed as one reason, which combined with the increasingly complex nature of presses, bottlenecks in the provision of upstream products and additional Covidrelated restrictions to create project delays. Chinese revenues reached €30m, meaning that Wemhöner's total revenues were likely in the region of €120m. The slight downward trend recorded in years past has thus persisted. Total revenues had first topped the €140m yardstick in the 2018 financial year, before sliding to around €135m in 2019 and to a good €130m in 2020 because of slightly weaker business in China.



Wemböner short-cycle press

(Photo credit: GIM Export)





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Sasol sells European wax business to Awax



Hamburg site (Photo credit: Tobias Arbelger stock.adobe.com)

The South African chemical group Sasol Ltd., based in Johannesburg, has sold its wax product business, which is pooled in Sasol Wax GmbH, to the Italian company Awax S.p.A., headquartered in Santena. Piemonte, with effect from 1 March 2022. The deal was part of a group-wide restructuring programme that was launched last year. Sasol Wax's activities, including its production sites in Hamburg (Germany), Linz (Austria) and Birkenhead (UK), were renamed Hywax GmbH upon closing. Like Awax's existing subsidiaries, the company is to operate independently. Hywax's portfolio includes HydroWax paraffin dispersions for use in the wood-based panel industry, wax emulsions and dispersions for other applications, paraffin, microcrystalline waxes and synthetic Fischer-Tropsch waxes.

The two sites in Hamburg and its location in the UK stemmed from Sasol's February 2003 acquisition of ExxonMobil's wax and oil emulsions business, which did business as Mobil Oil at that time. The location in Austria, which mainly served customers in Austria and Eastern Europe, started operating in the fourth quarter of 2003. According to its latest published financials, Sasol Wax GmbH sold 317,245 (2018/2019: 330,165) t of wax products in the 2019/2020 financial year (ended 30 June), generating revenues of €348.1m (366.6m). The financial report published at that time stated that both a 3.9% decrease in sales volumes and changes in the product mix had contributed to the 5.0% decline in revenues. The Construction Board unit had shown a similar performance to the group as a whole with a 4.7% fall to €76.2m (79.9m). Business with the woodbased panel industry accounted for 21.9 (21.8) % of group revenues.

Koskisen to use NeoLigno in production

The Finnish plywood and particleboard manufacturer Koskisen Oy, headquartered in Järvelä, will be the first industrial company to use the NeoLigno bio-based adhesive system developed by Stora Enso Oyj, based in Helsinki, to make particleboard. Industrial tests are currently underway at the Koskisen particleboard mill in Järvelä. Previous reports indicate that this mill has an annual capacity of around 115,000 m³ using two singledaylight presses. Once optimisation work has been completed, the company plans to launch Zero Furniture Board, a product glued entirely using the NeoLigno system without the use of formaldehyde or isocyanates, in autumn 2022. The NeoLigno gluing system will next be used in Koskisen's plywood manufacturing process, too.

According to Koskisen, Zero Furniture Board will be the first furniture particleboard product made entirely out of renewable raw materials. The manufacturing process mainly uses residual wood from Koskisen's lumber and plywood production activities. Lignin from pulp production serves as the raw material for NeoLigno binders. Stora Enso had started processing lignin in 2015. Beginning in 2017, the company developed lignin-based adhesive for plywood production in cooperation with the Latvian birch plywood manufacturer Latvijas Finieris AS, based in Riga. This adhesive has been used at Latvija Finieris plants under the RIGA ECOlogical name since the end of 2020. The upstream products for lignin come from Stora Enso's Lignoboost plant at the Sunila pulp mill.

This Lignoboost plant also makes upstream lignin products for NeoLigno binders. Stora Enso currently offers two product versions that can be used to manufacture particleboard and insulation. The particleboard variant is marketed under the NeoLigno Trim name. NeoLigno Therm is designed to replace conventional binders in the production of mineral wool (glass wool, rock wool).

Methanex restarted plants in Chile and New Zealand



Methanex plant in Chile

(Photo credit: Methane:

At the beginning of October 2021, the Chile IV plant of Canadian Methanex Corp., based in Vancouver, British Columbia, resumed operations after a shutdown of around ten months. According to the company, sufficient quantities of gas are available to operate both Chilean plants until at least the end of April 2022. However, the subsequent winter months in the southern hemisphere are typically characterised by lower gas availability. Due to the limited supply situation, one of the two methanol facilities in Motunui

(New Zealand) was recently taken out of production. At the end of May, Methanex had ceded gas supplies to energy supply company Genesis Energy Ltd. (Auckland) in order to relieve the tense electricity market. Following expiration of this agreement, the plant was brought back into operation as planned at the end of August. In contrast, the Waitara Valley plant - which is designed for an annual capacity of 530,000 t - will not resume operations until a sufficient gas supply can be secured.

The same applies to the Titan plant in Trinidad & Tobago, with its annual capacity of 875,000 t; this facility was temporarily shut down in mid-March 2020 following the outbreak of the corona crisis. At the beginning of 2021, Methanex extended the shutdown indefinitely due to insufficient gas supply and uncertainties concerning market developments. Since then, production in Trinidad & Tobago has been concentrated at the joint venture plant operating under the name Atlas.

Hexion Group and GP Chemicals are to be sold, new owner for Arclin

Several North American resin manufacturers change hands

The North American resin business is undergoing a reshuffle with Arclin Inc. (Roswell, Georgia) changing ownership and the announcement of divestment plans for Hexion Inc. (Columbus, Ohio) and for phenol activities belonging to Georgia-Pacific Chemicals LLC (Atlanta, Georgia) in the past few months.

Bakelite Synthetics LLC, based in Louisville, Kentucky, has reached an agreement with Georgia-Pacific LLC, headquartered in Atlanta, Georgia, to acquire GP's phenolics chemicals activities in late November 2021. Along with GP's US research and development centre in Decatur, Georgia, the transaction includes ten production sites, eight of which are located in the US. The company also operates two South American locations. The transaction. which is still subject to the usual closing conditions and approval by competition authorities, is expected to close later this year. All 600 Georgia-Pacific Chemicals employees will subsequently transfer to Bakelite Synthetics.

Bakelite was created in late April 2021 when several activities belonging to Hexion were sold off. The company currently operates eleven production facilities, two of which are located in the US and nine in Europe. With around 900 employees, the company produces phenolic resins, moulding compounds, formaldehyde and formaldehyde derivatives, among other products.

Following the spin-off of the divisions "Phenolic specialty resin", "Hexamine" and "European-based forest products resins" as well as the epoxy-resin business division in several steps in 2021, it seems that the Hexion Group is now to be sold as a whole. On 20 December, the companies ASP Resins Intermediate Holdings Inc. and ASP Resins Merger Sub Inc., belonging to the private-equity com-



Bakelite is going to buy several GP Chemicals sites

(Photo credit: Bakelite)

pany American Securities LLC, signed a binding agreement for the acquisition of all Hexion shares.

The transaction is to be completed during the course of the first half-year. The prerequisites are the usual approvals under competition law and the completion of the sale of the epoxy-resin business to Westlake Chemical Corp. of Houston, Texas, agreed on 24 November. According to a statement released on the signing of the contract by Hexion, the majority of shareholders have already signalled their approval for the sale. If the transaction is successful, ASP Resins Merger Sub Inc. is to be merged with Hexion. The company operates 27 production facilities worldwide with a total of roughly 1,300 employees.

The private equity firm Lone Star Global Acquisitions Ltd., based in Dallas, Texas, has parted ways with its stake in the North American resin manufacturer and treater operator Arclin almost five years after buying it in the first quarter of 2017.

Towards the middle of August 2021, the company reached an agreement with another private equity firm, The Jordan Company LP (TJC) on the cornerstones of the sale. The transaction closed in October. Its senior management team has maintained its stake and will continue to lead the company going forward.

Arclin presently operates 12 production sites in the US and Canada. The company was founded in June 2017 when Dynea Chemicals Oy, headquartered in Helsinki, Finland, spun off its Dynea North America division. In mid-July 2012, Arclin also acquired the North American entities of Coveright Surfaces Holding GmbH. The US investment firms Black Diamond Capital Management LLC and Silver Point Capital LP bought a majority stake in Arclin in a debt-toequity swap in January 2010 after a bankruptcy application in July 2009. Its divestment to Lone Star was then handled by LSF 10 Cedar Investments Ltd., a company created for the purposes of this transaction.

Another slump in melamine and methanol output in the fourth quarter of 2021

OCI group wants to spin off methanol activities into a separate company

The fertiliser and industrial chemicals producer OCI N.V., which is based in Amsterdam and controlled by the Egyptian firm Orascom Group, wants to spin off its methanol activities known as OCI Methanol Group into a separate company to be listed on the Abu Dhabi Global Market (ADGM).

These activities comprise three plants in Delfzijl, Netherlands, and in Beaumont, Texas. This realignment will see the United Arab Emirates (UAE)-based private equity companies ADQ and Abu Dhabi Holding jointly acquire a 15% stake in OCI Methanol Group. The purchase price of US\$375m for this stake translates into an enterprise value of around US\$2.5bn. The three companies involved had reached an agreement in principle in mid-November 2021; a binding agreement was signed at the beginning of February. OCI Methanol Group intends to boost its sales of methanol for fuel applications once the deal closes, a step that is slated to take place during 2022. Hydrogen is to be increasingly used as a raw material.

The planned transaction includes the plant in Delfzijl, which does business as BioMCN B.V., OCI Beaumont LLC and the joint venture Natgasoline LLC, which also started operations in Beaumont, Texas, in mid-2018. However, the Delfziil facility, which has two production lines and a total designed capacity of around 990,000 t/year, closed indefinitely in June 2021 due to excessively high natural gas prices; a date for resuming operations has not been given yet since the situation on natural gas markets remains challenging. OCI's own plant in Beaumont can now produce a good 1.0m t of methanol and 365,000 t of ammonia following several expansion projects in recent years. According to OCI, Natgasoline is one of the world's largest methanol plants with an annual capacity of around 1.8m t, but has repeatedly contended with production problems in recent years.

The planned methanol joint venture is OCI's second major partnership in the Middle East. In October 2019, the company combined its urea, merchant ammonia and fertiliser activities in the Mediterranean region and the Middle East in the Fertiglobe joint venture established together with Abu Dhabi National Oil Company (Adnoc). In early 2019, Saudi Basic Industries Corp. (SABIC), based in Riyadh, Saudi Arabia, declared an interest in OCI's methanol assets, but preliminary talks held at the time came to nothing.

Scheduled stoppages for maintenance work, technical problems at a few plants and longer-term shutdowns combined with the strained gas supply situation meant that several product areas within OCI made and sold less in the fourth quarter of 2021. Melamine sales volumes were 5% lower than the prior-year period at 35,200 Oct.-Dec. 2020: 37,000 t. Urea sales tumbled by as much as 32% to 995,600 (1.472m) t, while sales of methanol made at OCI's own plants fell by 44% to 336,700 (602,400) t.

OCI initially responded to the spike in European natural gas prices by temporarily idling methanol production at BioMCN B.V., headquartered in Delfzijl. Its two plants have been offline since June 2021. Several stoppages for maintenance and technical troubles at the joint venture Natgasoline played a part in dwindling methanol production.

OCI saw its melamine production drop by 9% to 131,900 (2020: 144,600) t in 2021 as a whole. Sales had been even weaker in the first three quarters than they had been in the fourth quarter (Q1: 34,200 t, Q2: 32,800 t, Q3: 29,700 t). Sales of methanol made at its own sites were also 9% lower in a year-on-year comparison at 1.747m (1.927m) t.



BioMCN plant in Delfzijl

(Photo credit: OCI)

First plant to be commissioned by end of 2022, second already ordered

Metafrax invests in two melamine plants with 80,000 t capacity

Russian chemical group PJSC Metafrax, which took over Austrian Dynea Holding GmbH (Krems) in mid-2013 and subsequently renamed its glue/ impregnating resin activities in Metadynea Austria GmbH, also intends to launch melamine production.

The Company is constructing two plants, each designed for 40,000 t/year, at Metadynea LLC (Gubhaka, Perm region). The first plant is to be built as part of the ammonia-urea-melamine production complex, which was initiated in 2017 and is now more than 90% complete. Commissioning of the production complex, which has been designed for an annual capacity of around 300,000 t of ammonia, 575,000 t of urea and 40,000 t of melamine, was planned for the end of 2021, but has been postponed until 2022 due to corona-related delays. Within the scope of the overall project, which according to Metafrax involves an investment equivalent to around €1bn, existing methanol production in Gubhaka is also to be expanded.

Even before the first melamine plant became operational, Metafrax commissioned Swiss Casale S.A. (Lugano) to construct the second plant on 10 November. The contract was signed in Moscow. A corresponding memorandum of understanding had already been signed on 22 July. Casale has already supplied plant technology for the AUM complex. The second melamine plant is to be integrated into this complex and commissioned in the course of 2025.

With the annual capacity of around 80,000 t, which will then become available, Metafrax will be one of the largest melamine producers in Europe. Armen Garslyan, chairman of the Metafrax board of directors, explained the fact that the company is planning to double production capacities only a few years after



Metafrax chemical site in Ghubaka

(Photo credit: Metafrax)

entering melamine production on the basis of increases of global as well as in-company demand. Metafrax estimates that global demand will increase by an average of 3-4% over the next four years. According to Garslyan, in-company demand for adhesive and impregnating resin production at the Metadynea sites in Gubhaka and Krems as well as at JSC Karbolit in Orekhovo-Zuevo (Moscow region) will already rise to around 48,000 t this year. Since the company also plans to supply melamine to external customers in Russia, Europe and other export markets in future, a decision concerning the follow-up investment had to be made

Metafrax' formalin plant now starting up

At the end of October 2021, Metafrax began the process of commissioning the new formalin plant built at its headquarters in Gubhaka in the region of Perm, Russia. The annual capacity of this third formalin plant at the facility is given as

around 180,000 t (55%). Approximately 90,000 t of methanol are processed at the plant, raising Metafrax' total internal methanol processing capacity to around 450,000 t. The additional formalin volumes are to be supplied primarily to the resin-production plant of the Metafrax group company Metadynea LLC, whose products made in Gubhaka include glue and impregnating resin.

"Dynea fasil" technology developed by Dynea AS of Lillestrøm, Norway, is used in the new formalin plant. Metafrax and Dynea had signed a corresponding licence and planning order in April 2019. The enlargement of the formalin capacity in Gubhaka is part of a major investment project, which also involved the construction of a new paraformaldehyde plant with an annual capacity of approximately 30,000 t. In a next step, Metafrax is also planning to increase the formalin capacity at JSC Karbolit of Orekhovo, Moscow region. The production capacity for formaldehyde resins at Metadynea is to be boosted by 200,000 t.

Investment activity is picking up in the wood-based panel and surfaces industry

A few panel manufacturers break away from the rest of the industry

The knock-on effects of the Covid-19 pandemic severely influenced the wood-based panel and surfaces industry in 2021, as well.

A plunge caused by the first lockdown in the second quarter of 2020 gave way to an unexpectedly strong recovery in demand over the next few months; this trend has continued to play out during the whole year of 2021, too. The situation continued to improve in a variety of segments during the first half of 2021. Many companies had scaled back production and reduced their inventories after the outbreak of the pandemic. The subsequent recovery, combined with shifts in global supply flows, culminated in a structural shortage of material on markets. Supply was limited in the wake of the aforementioned destocking and no longer sufficient to meet demand that was still growing. Many companies have reacted to this shortage by purchasing extra amounts to ensure their supply of upstream products. Lead times have increased more and more as a result. From spring onwards, the market encountered supply constraints that endured into the third quarter. Production plans had to be adjusted and production cutbacks or shutdowns could not always be avoided. The combination of these factors paved the way for an unusually large increase in prices for almost all products during 2021. At the same time, though, sourcing upstream products has become increasingly critical. Businesses had a really hard time sourcing all upstream products used to make resin, glue/impregnating resin, PMDI glue, melamine film and, in the second half of the year, decor paper and printing decors. These escalating costs for upstream products have at least partially nibbled away at better margins achieved by raising prices.

Wood-based panel and surface material manufacturers have benefited to varying degrees from the upswing on European markets, which has now lasted for more than a year in many areas, although the degree to which this is true depends on the product range and portfolio, the markets

they served and their sales and pricing policies. Companies with the right focus enjoyed much stronger growth in revenues and earnings than the industry average. The resulting cash flow can be used for major investments in the years ahead. It is already apparent that a few wood-based panel manufacturers, in particular, will use a large part of the earnings generated this year to make major investments. Their varying paces of expansion will make the differences from one company to another more pronounced, at least in the medium term.

Kronospan may well continue to set itself apart from the rest of the industry by building new sites in Eastern and Southern Europe, expanding several Central European locations and carrying out more acquisitions. Kronospan Holdings plc, based in Nicosia, Cyprus, became the sole owner of the Austrian firm M. Kaindl OG, headquartered in Wals, Salzburg, during the first half of the year. A short time later, Kronospan reportedly got the nod to acquire two Polish mills from Pfleiderer Group B.V. & Co. KG, based in Neumarkt, Germany, in a sales process that had been going on for some time. The Egger Group, headquartered in St. Johann, Austria, completed a major programme of investments by commissioning a new particleboard mill in Lexington in the US state of North Carolina in September 2020. The company is mainly expanding its existing sites at the moment. Swiss Krono Group is adopting a similar strategy: it intends to deliver substantial growth in the OSB business, in particular, over the next few years. By contrast, Sonae Arauco S.A., based in Madrid, is continuing to take a more cautious approach in Europe. Its last major expansion entailed commissioning a new particleboard line in Beeskow, Germany, in mid-2020. Conversely, Sonae Arauco shut down its final production activities in Horn-Bad Meinberg at the end of 2020. The hot topic at Pfleiderer Group is the



Kronospan became the sole owner of M. Kaindl in spring 2021.

(Photo credit: EUWID)

potential exit of its owner Strategic Value Partners LLC (SVP), headquartered in Wilmington, Delaware. According to unconfirmed information, a sales process for its German mills has now been launched.

These changes in the European wood-based panel industry will lead to capacity growing again and primarily involve projects to add particleboard and OSB capacity. More MDF/HDF projects are in the pipeline in other regions, such as Turkey, Central and South America, India and China. Investments in new OSB mills are back on the agenda in North America, too, now that most of the lines that were shut down indefinitely have come back on stream.

Particleboard manufacturers are gradually using more recycled wood in a growing number of regions. Companies have continued to invest more in the necessary processing technology and collection systems. A few OSB manufacturers have also started using recycled wood in the core layer in the past few years. The first such projects are afoot in the MDF/HDF industry, too. The European wood-based panel industry's other top investment priorities include building or expanding biomassfired power plants, adding new drying technology and improving emissions.

Businesses are also paying special attention to ramping up their capacity to make pressure-resistant insulating board and flexible insulating mats. Both established manufacturers and newcomers from the sawmill industry are getting involved in expanding capacity for these products. For its part, the wood-based panel industry is holding back on undertaking its own projects in this area. The same applies to the laminated veneer lumber (LVL) sector, which continues to be driven primarily by companies from the plywood, insulation board and sawmill industries in Europe.

A large number of wood-based panel manufacturers are instead making downstream processing their investment priority. Along with raising laminating capacity, companies have also initiated several projects in the laminate sector in recent months. Egger and Kronospan are expanding their existing HPL/CPL



SVP is evaluating an exit from Pfleiderer.

(Photo credit: EUWID)

facilities. Unilin bvba, based in Wielsbeke, Belgium, is poised to start making laminates, too. The hot topic in the laminates industry has been acquisitions carried out by Broadview Holding B.V., headquartered in s'Hertogenbosch, Netherlands, in recent years. Subsequent efforts to unlock synergies among the different manufacturers bought by Broadview have also culminated in shifts in production over the past year. In recent months, there has also been fresh speculation that Wilsonart International Holding LLC, based in Temple, Texas, might stage an IPO in a move that might be preceded by the spin-off or sale of Wilsonart's European activities. The main changes in the worktop sector will come as a result of insolvency filings by D. Lechner GmbH and Lechner Holding AG, both based in Rothenburg ob der Tauber, Germany. The sales process, which has since begun, wrapped up during the first quarter.

Changes have been few and far between in the surfaces industry in the past year. Most companies concentrated on modernisation projects in Europe. Projects adding capacity were mainly evident in the finish foil sector. The second half of the year saw a little more movement with Schattdecor AG (Thansau, Germany) buying a stake in Fine Decor GmbH (Oelde, Germany) and a new printing machine announced by Lamigraf S.A. (L'Amettla del Vallès, Spain) for one

of its two European sites. Likora GmbH, headquartered in Horn-Bad Meinberg, Germany, also made new investments in rotogravure printing. Kronospan now also intends to invest in decor printing at its Russian site in Lyudinovo, Kaluga oblast. Digital printing has also made strides forward. Interprint GmbH, based in Arnsberg, Germany, has now commissioned its third machine. Two more converters - Swiss Krono Tex GmbH & Co. KG, headquartered in Wittstock-Heiligengrabe, Germany, and the Spanish firm Grupo Losán, based in La Coruña - have also entered the digital printing market.

Developments in the decor paper business include Ahlstrom-Munksjö Oyj, based in Helsinki, signing contracts to buy a 60% stake in the Chinese decor paper manufacturer Hebei Minglian New Materials Technology Co. Ltd, headquartered in Xingtai, Hebei Province, during the autumn. The spin-off of its Decor Solutions division into a separate company will not happen until 2022, though. Kronospan Group continued to press ahead with its plans to build a decor paper mill in Lyudinovo via Ultra Dekor RUS 000. In August, Mayr-Melnhof Karton AG, headquartered in Vienna, put the finishing touches to a deal to purchase all shares in Kotkamills Group Oyj, based in Kotka, Finland, after brokering a deal at the start of December 2020.

Larger increases in finished product prices trickling down to demand

Additional cost hikes causing problems throughout the entire value chain

The wood-based panel industry's manufacturing costs have risen sharply in almost all areas during the past few months.

An upward spiral in chemical raw material prices that began in the second half of 2020 has intensified as gas prices soared starting in the summer of 2021. Substantial hikes in costs for buying adhesive and impregnating resins ensued during the autumn. The trend in urea and methanol prices has recently flattened out somewhat. Prices for PMDI adhesive, which is mainly used in OSB production, have even softened slightly in recent months after rising sharply up until the third quarter of 2021. By contrast, European melamine producers have sought significant price increases in the first quarter, which vary in size depending on how long contracts

Decor paper purchasing costs might also edge even higher. Several manufacturers announced the next markups for deliveries from February or March onwards. Until now, companies have mainly pointed to the consistent growth in titanium dioxide prices and currency-related spikes in pulp purchasing costs. Now, though, manufacturers are focusing more on the sharp spike in energy costs.

Rising gas and electricity prices are causing headaches for other supplier industries, too, with the situation not expected to ease until the end of winter. The situation in the logistics sector remains difficult. Lorry capacity bottlenecks have worsened in recent months, leading to significant delays at almost all destinations. Sources recently reported particular constraints with deliveries from Eastern Europe, which have resulted in costs increasing accordingly. A few wood-based panel converters have therefore switched to picking up partial orders in order to safeguard supply.

While chemical raw material and surface material purchasing costs increased dramatically during 2021, prices for the types of timber used to make wood-based

panels have risen only slowly over a longer period of time. The timber procurement situation has reversed course in recent weeks, though. The availability of pulpwood and sawmilling residues has taken a substantial turn for the worse in recent months in the wake of much lower arisings of timber felled by storms, snow or beetle infestation, along with restrictions on harvesting fresh timber and market-related production cutbacks in the sawmill industry.

However, demand from the wood-based panel and pulp industry remains brisk; demand from the pellet industry has even increased as mills continue to add capacity. Markets for recycled wood have shown similar trends of late. Supply is limited, while demand has become much stronger as the particleboard industry boosts its processing capacity and as more timber is incinerated as an energy source amidst turmoil in the energy sector.

The wood-based panel industry's earnings have not been eroded in recent months despite these occasionally sizeable hikes in costs. In fact, these higher costs were offset or even more than erased by widespread markups in all relevant product areas. At first, manufacturers mainly justified these price increases by pointing to the imbalance between supply and demand caused by pandemic-related stoppages in spring 2020, which is still having an impact in many areas today. Wood-based panel producers have since shifted their rationale to the trend in production costs, as the supply situation improved in a number of areas. However, many converters are of the opinion that the wood-based panel industry still has enough leeway to compensate for spiralling costs after last year's substantial markups.

For their part, wood-based panel converters have also tried to pass on higher



Prices for urea more than quadrupled in 2021.

(Photo credit: EUWID)

purchasing costs, at least in part, by raising their own prices. Much longer contracts and price commitments have made it difficult to pass on these cost hikes in a timely manner in many instances. What's more, since many upstream product prices have increased in such rapid succession, the total cost increase is so high that it is almost impossible to pass them on fully without experiencing negative effects on demand.

Manufacturers of building parts, interior doors and floor coverings typically started to compensate for higher woodbased panel costs by charging more in the first half of 2021 and have since raised prices in several instalments. On the other hand, the furniture industry is finding that it is taking longer to elevate prices; the first significant markups were not announced in a few sectors, such as kitchen furniture, until the beginning of 2022. However, even before higher prices took hold, a variety of companies have raised the question of whether the proposed markups were even high enough or whether the manufacturers had proceeded too defensively.

The Ikea Group revealed plans in early January to raise sales prices across its entire product range by an average of 9%, something that is also viewed as a sign of mounting pressure on the furniture industry's earnings. In the past, Ikea has always attached importance to keeping sales prices at least stable and has continuously strengthened its market position by taking this approach.

However, rising inflation could also slow demand for furniture and building parts, especially if the economy as a whole continues to weaken or if consumer spending shifts further. Businesses had already seen substantial negative effects in the second half of last year for low-priced flat-pack furniture and hard flooring, which are mainly sold by large retailers and DIY stores. In some instances, the change in consumer behaviour and higher prices had cooled demand so much that manufacturers active in this sector had to scale back production.



More and more European companies suspending operations in Russia

Mounting restrictions affecting Russian imports, exports and manufacturing

Economic and financial sanctions on Russia have severely limited business ties between Russia and other countries in the timber and furniture sectors, too, within just a few days of the start of the war in Ukraine.

International transportation has become much more complicated due to bottlenecks in freight capacity, the growing exclusion of Russian logistics companies and delays at border crossing points. Ukrainian shipping companies, which until now had handled a majority of imports into the EU from Eastern Europe, are barely available anymore. Russian companies can no longer be used. A number of businesses in the timber sector are currently trying to set up handover points at the Russian border or in Russian ports where suppliers' goods can be transferred to non-Russian transporters or cargo ships. In late February and early March, attempts were also made in advance of looming export restrictions to move large quantities of sawn timber or wood-based panels from Russia or Belarus to neighbouring European countries for interim storage, for instance, using block trains. However, these attempts were not very successful because of rapid bottlenecks in lorry and wagon capacity.

The suspension of trade with Russia in products and components that can be used for military purposes is having a relatively severe impact on deliveries of machinery and plants, components and spare and wear-and-tear parts. Machinery and plant manufacturers have growing doubts about whether and how long exports to Russia will be possible at all. The first companies have already announced that they plan to focus on wrapping up existing contracts for the time being when doing business with Russia. Negotiations about new orders had been suspended until further notice. The dual-use limitation might also affect production activity at Russian mills as a result of restrictions on spare and wear-and-tear parts. Engines, drives, controls and Teflon seals are examples of critical products. The situation is even more critical for parts that have to be sourced from North America. These restrictions have already led to relatively severe production cutbacks in sectors of the economy importing a fairly large proportion of their upstream products. For instance, many foreign car, lorry and electric appliance manufacturers shut down production at their Russian factories in the first week of March.

Relatively wide-ranging restrictions now apply to imports and exports of sawn timber. wood products, wood-based panels, furniture and a variety of upstream products used by timber and furniture companies, too. Wood product exports from Ukraine, which are already barely an issue at the moment due to the collapse of the country's economy and logistics infrastructure, are technically banned under the EUTR's rules because of the hostilities. In a decision made on 4 March, PEFC International designated timber and timber products from Russia and Belarus as "conflict wood". As such, it cannot be used in PEFC-certified products with immediate effect. On 8 March, FSC International then decided that wood and forest products from Russia and Belarus cannot be used in FSC-certified products or sold as FSC-certified as long as armed violence continues in Ukraine. The Council of the European Union adopted a ban on importing, buying and transporting all wood products from Belarus, which actively supported Russia's invasion of Ukraine, with Regulation (EU) 2022/355 issued on 2 March.

These constraints associated with logistical issues and export restrictions are being compounded by payment processing difficulties. Russian companies, in particular, had to reorganise their cash flows after several Russian banks were excluded from the Swift payment system. European businesses had already primarily worked with non-sanctioned Russian institutes or western banks to finance their activities in Russia due to compliance rules. Financial sanctions that have now been imposed are a bigger factor for investment projects.



Transports from and to Russia got complicated.

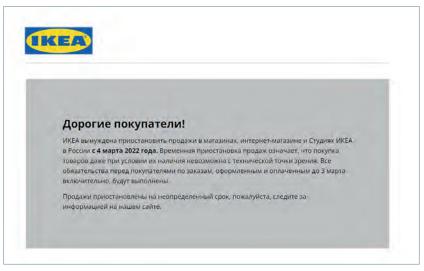
(Photo credit: EUWID)

For instance, the German government temporarily suspended the granting of Hermes export guarantees and investment guarantees for Russia on 25 February. These Hermes guarantees, which are used by woodworking machinery manufacturers, are used to shore up German businesses' exports to countries with an elevated risk of non-payment. Investors are also uncertain whether existing and looming sanctions might limit existing Euler Hermes arrangements or loans from western investment banks, such as the European Bank for Reconstruction and Development (EBRD).

Logistical issues are also hampering investment projects in Russia, Belarus and Ukraine. Along with bottlenecks in transport capacity, these issues are primarily associated with deploying assembly and commissioning staff. Several woodworking machinery manufacturers and assembly companies have recalled their workers from Russia and Belarus, too. Building sites and sales and service branches had already been closed in Ukraine upon the outbreak of war.

In light of these mounting logistical challenges and likely additional sanctions and export restrictions, many companies, including those in the wood and furniture sectors, are considering whether maintaining production and sales activities in Russia and Belarus makes sense at all. Several companies had already announced plans to suspend operations in these markets in the first week of March. These decisions primarily affect production sites, sales branches and purchasing offices. In particular, Ikea's decision on 3 March to cease all production activities in Russia and close all lkea stores in the country was a powerful signal. On 7 March, OBI Group, headquartered in Wermelskirchen, Germany, shuttered its 27 Russian DIY stores. In the sawn timber and wood-based panel business, Scandinavian companies have mainly paused operations, such as the Finnish companies Stora Enso Oyi (Helsinki), UPM-Kymmene Corp. (Helsinki), Metsä Group (Espoo) and Raute Oyj (Nastola).

Recent developments in Russia and Belarus will likely unleash longer-lasting changes in the timber and furniture sector, too. A number of companies underscored



At the beginning of March, Ikea decided to close its Russian stores.

(Photo credit: Ikea)

closer political and economic ties between Russia and China. It is thought quite possible that Chinese companies might fill at least part of the gap left by the exodus of European suppliers and trading partners. Within the wood and furniture industry, affected areas might include machinery and plant shipments from China and the diversion of wood, wood-based panels and upstream product deliveries to China.



Ukrainian mills offline/Exports from Russia become more challenging

War in Ukraine changing commodity flows in the wood-based panel business

The direct knock-on effects of Russia's invasion of Ukraine and the economic sanctions that Western countries have since imposed on Russia have had initial repercussions for business in the local wood-based panel and furniture industry within just a few days.

Many Ukrainian companies have had to cut back or stop production altogether due to severe restrictions on purchasing and distribution logistics. International companies have closed their sales offices. Importing wood-based panels is hardly an option anymore since logistics chains are largely disrupted. Particleboard imports from Russia and Belarus had already been restricted by anti-dumping duties that just came into force on 23 January. It is considered unlikely that production and sales activities will resume in the near future since the situation in Ukraine remains critical. Wood-based panel and furniture exports from Ukraine to neighbouring countries or onwards to Germany, Austria and Switzerland have largely ground to a standstill, as well.

Restrictions on international payment transactions introduced in the past few days, shortages of lorry capacity and delays in clearing customs at the Russian border are also affecting exports from Russia. The information available to date suggests that Russian woodbased panel and furniture plants are continuing to manufacture largely without disruptions. However, in the foreseeable future these facilities will have to focus on serving the domestic market given the restrictions on foreign trade, which are likely to intensify in the near future. Russian manufacturers may be able to offset potential limitations on business, at least for the time being, thanks to good order intake in recent months and low inventories. However, the sharp fall in the rouble at the end of February and



(Photo credit: EUWID)

the beginning of March is creating additional challenges.

Sources in the wood-based panel and furniture industry feel that some of these problems may spread to other Eastern European countries in the near future, too. The situation in Belarus, in particular, is viewed as critical due to its political ties to Russia. The Polish furniture industry. for instance, is also facing indirect repercussions as Ukrainian employees stop working. According to Central European buyers, this factor will exacerbate gaps in the workforce already caused by people coming down with Covid-19. Ukraine's neighbours might subsequently encounter a downturn in wood-based panel and furniture production, which would then at least indirectly affect exports to Central Europe.

The constraints on wood-based panel and furniture deliveries caused by production shutdowns, export restrictions and logistical problems are being compounded by current and planned economic and financial sanctions. Delays and restric-

tions on processing payments when doing business with Russia are already evident, depending on the banks involved. In their own view, European wood-based panel manufacturers with production sites in Russia are less affected by the sanctions that are now starting, as they have been working almost exclusively with unencumbered banks for a long time owing to existing compliance regulations. By contrast, Russian companies are more strongly intertwined with institutions controlled or managed by the state.

Insiders in the wood-based panel and furniture industry feel that the changes in commodity flows that have already occurred and those are expected in the weeks ahead might further complicate a supply situation that is still tense in at least some areas of many European markets. The loss of Ukrainian exports and potential restrictions on deliveries from Poland, Romania, Belarus and Russia will be hard to offset, at least in the short term, as manufacturers in Eastern and Central Europe are running at good capacity utilisation.

Logistical restrictions are limiting deliveries of raw materials and distribution of products

Wood-based panel plants in Ukraine have had to shut down

Russia's invasion of Ukraine has affected local wood and furniture production fairly quickly, as well. The information available to date suggests that most wood-based panel sites have had to shut down.

The Swiss Krono Group, which operates three mills in Ukraine through Swiss Krono TOB, shuttered its particleboard mill in Solonytsivka, in north-eastern Ukraine's Kharkiv Region, as early as the third week of February due to escalating political tension. An OSB mill in Kamianka-Buzka, in the western Ukrainian Lviv Region, had only just undergone a maintenance shutdown. Its restart-up was supposed to happen at the end of February but has been postponed for the time being. This means that just one of Swiss Krono's three Ukrainian locations, the particleboard mill and laminating plant in Broshniv-Osada, Ivano-Frankivsk Region, was still running at the end of February.

The Kronospan Group has halted production at its particleboard and OSB mill in Novovolynsk, Volyn Region; assembly and commissioning work at its new site in Rivne in the north-west of Ukraine also had to be suspended. Unconfirmed reports suggest that the particleboard line installed there had made its first piece of board in the fourth quarter. An OSB line planned as a second step was supposed to start operating in the second half of 2022, according to previous plans. Two particleboard mills run by Swisspan Ltd LLC, which is owned by the Swiss firm Sorbes AG, in Kostopil, Rivne Region and Nadvirna, Ivano-Frankivsk Region, and an MDF/HDF and laminate flooring mill operated by Rezult Ukraine LLC in Korosten, Zhytomyr Region, are apparently offline, too.

Logistical restrictions associated with the hostilities are limiting timber and adhesive deliveries and particleboard, MDF/HDF and OSB distribution. Regular transports are hardly possible at the moment. Manufacturing is also facing issues associated with soldiers being mobilised, among other things. Against this backdrop, wood-based panel manufacturers operating in Ukraine currently expect production to stand still for a long amount of time.

According to the latest annual report drawn up by the European Panel Federation (EPF), based in Brussels, the five particleboard mills run by Swiss Krono TOB, Kronospan UA and the Swisspan Group produced 1.245m (2019: 1.294m) m³ in 2020, 3.8% less than in 2019. However, foreign trade had picked up significantly. Imports were 20.9% higher than in 2019 at 176,000 (146,000) m³, while exports leapt by 16.1% to 361,000 (311,000) m³. Apparent consumption was thus 6.1% lower at 1.060m (1.128m) m³. The import share in domestic consumption increased from 13 % in 2019 (146,000 m³) to 17 % in 2020 (176.000 m³). Ukraine was a net exporter of particleboard in 2020, with more than a quarter of domestic production being exported.

Ukraine has just one MDF/HDF producer, Rezult Ukraine, which uses a significant proportion of its output in down-stream laminate flooring production. According to EPF figures, the production of MDF/HDF for the open market increased by 9.2% to 164,000 (150,000) m³ in 2020. Imports were 41.0% higher at 320,000 (227,000) m³; exports soared by as much as 59.4% to 113,000 (71,000) m³. The result was a 21.2% year-on-year growth in consumption to 371,000 (306,000) m³.

The ramp-up of the mill commissioned by Kronospan in Novovolynsk in spring 2020 boosted Ukrainian OSB production by 60.4% to 242,000 (151,000) m³ in the year as a whole. On the other hand, imports fell by 37.8% to 105,000 (168,000) m³. Exports hardly played a role at 14,000 (7,000) m³. Apparent consumption was put at 332,000 (312,000) m³.



Rezult had to stop MDF production in Korosten.

(Photo credit: Rezult)

Restrictions on payment transactions leading to delays in ongoing projects

Sanctions imposed on Russia might slow investment activity in WBP industry

Fairly positive business prospects of late for machinery and plant manufacturers in Ukraine and Russia specialising in the manufacturing and downstream processing of woodbased panels have taken a significant turn for the worse just a few days after Russia invaded Ukraine.

Ongoing investment projects in Ukraine had to be halted. Assembly and commissioning staff were withdrawn after the Russian assault, if not sooner, and building sites are currently closed. There is little chance of new projects in Ukraine coming to fruition in the foreseeable future.

The outlook has become more overcast in Russia and Belarus, as well. Several wood-based panel manufacturers have now stressed that they intend to continue the projects that they have already started, as planned. However, economic sanctions that have been imposed and are in the planning will make it harder to implement these projects. Major problems are already emerging with financing,

payment processing, technology delivery and installation/commissioning. A few assembly companies have also recalled their employees from Russia. Constraints in transport capacity and delays in clearing customs are making it difficult to import machinery and equipment. Project financing is affected, for instance, by the suspension of state guarantees and investment guarantees and by sanctions imposed on Russian banks. These sanctions, together with the planned restrictions on international payment transactions, might also cause problems with issuing letters of credit and settling supplier invoices.

In addition to ongoing projects, a large number of investment plans in the Russian wood-based materials industry are on the verge of decisions being made or technology orders being placed. It is not yet clear how investors will react to the change in the framework conditions. It appears almost impossible that projects will be implemented as planned; continuing projects will at least experience delays. Foreign wood-based panel manufacturers will probably try to stick to their plans and thus strengthen their position on the Russian market. Severely restricted financing options due to economic sanctions and the much weaker rouble will become bigger obstacles for Russian investors who have developed more projects in recent months after a lengthy break.

The single-largest project in Ukraine is Kronospan's planned construction of a particleboard and OSB mill in Rivne in the Rivne region. Unconfirmed reports suggest that the MDF/HDF and laminate flooring manufacturer Rezult Ukraine LLC, based in Korosten, Zhytomyr Region, has explored investing in a second production line; however, it has become unlikely that the project will be fleshed out due to current events. In Russia, a larger number of projects are taking place involving both foreign and Russian companies. The Kronospan Group is the largest investor with ongoing projects in Lyudinovo, Kaluga oblast, Elektrogorsk, Moscow oblast, Igorevskaya in Smolensk oblast and Chaadaevka, Pensa oblast. Swiss Krono Group has already started work on expanding its particleboard and MDF/HDF mill in Sharya, Kostroma oblast, by adding an OSB mill. The Egger Group, based in St. Johann, Austria, wants to replace its particleboard mill in Shuya, Ivanovo oblast in Russia in a new construction project.

Russian investors have also stepped up their investment activity in the last two years. The plywood and particleboard manufacturer ZAO Murom, headquartered in Murom, Vladimir oblast, entered the OSB manufacturing business last year. Uvadrev Holding OAO, based in Uva, plans to replace an older particleboard line at its headquarters with a continuous production line. The sawmill company OOO Luzales, headquartered in Syktykar, Republic of Komi, and the Altailes Group are among those pursuing MDF/HDF projects.



Uvadrev is planning to replace a particleboard line

(Photo credit: Siempelkamp)



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Metsä Group set to invest €200m in a new LVL mill

The Finnish company Metsä Group, based in Espoo, intends to raise its Kerto LVL production capacity, currently listed at around 310,000 m³, by around 50% by building a new mill in Äänekoski. According to plans unveiled on 16 September, the new mill should be built in several phases between 2022 and 2026. Its designed capacity is put at roughly 150,000 m³. The project will require approximately 375,000 m³ of roundwood each year, which is to be sourced in Finland. Metsä intends to employ some 140 workers at the new mill when all is said and done. The proiect will require a total investment of about €200m.

Metsä currently makes LVL at two Finnish sites in Punkaharju and Lohja. The Punkaharju mill had increased its capacity by around 50% to 190,000 m³ per year by commissioning a third production line in the first quarter of 2019. Metsä had installed a new production line in Lohja to replace two older lines starting in 2016. This replacement project was completed in August 2017. The mill's capacity had increased from around 100,000 m³ to 120,000 m³ as a result.

The new LVL mill in Äänekoski is to be built on a piece of land around 150 ha in size, which borders the current Metsä facility to the south. According to the current local master plan, this site is already earmarked for industrial use. The detailed local plan is to be ready by the start of 2022. Metsä Group currently operates a pulp mill, a biorefinery and a veneer plant in Äänekoski. The 1.3m-tpy pulp mill and the biorefinery, which makes a variety of base materials for the chemical industry out of pulp production by-products, started operating in mid-2017. Both areas are part of the Metsä Fibre division. The veneer facility, which like the plywood and LVL mills is part of the Metsä Wood division, started operating in the first quarter of 2018, and supplies a birch plywood mill in Pärnu, Estonia, that got up and running in August 2018.

Garnica plans summer start up of new plant



Construction work in Troyes

(Photo credit: Garnica)

Spanish plywood manufacturer Grupo Garnica Plywood S.A. (Logroño) plans to start up its new poplar veneer plant in Troyes (France) at the end of summer. After the original schedule could initially not be met due to various external factors, there have been no further delays in construction progress over recent months.

Already in April 2021, the company had targeted start of production in the second half of 2022. The plant building has meanwhile been largely completed. The first equipment is to be installed in March. Equipment suppliers include Italian machinery manufacturer Angelo Cremona S.p.A. (Monza) and French SGM Industry (Belin-Beliet). At the start of production, about 50 persons will be employed in Troyes.

The plant is being built on premises stretching over 20 hectares and is to cover an area of around 40,000 m² when completed. The first construction phase, for which an investment volume of about €40m has been estimated, includes construction of the veneer plant with a peeling line. At a later stage, plywood

production is also planned at the site. In total, Garnica plans to invest around €80m in the project. The company has not yet specified when the next construction phases will follow. When the project was first announced in 2018, a total period of six years, or completion by 2025, had been envisaged. According to plans at the time, the first construction phase was to be completed in 2020. In the early phase, however, start of construction was delayed due to official requirements in connection with archaeological investigations. The foundation stone was therefore not laid until 28 January 2020. In the further course of the project, work was then slowed down by the corona crisis.

The site in the Grand Est region in the north-east of France was chosen because it offers good availability of raw materials from regional poplar plantations, a sufficient potential workforce as well as favourable transport connections. After commissioning of a second peeling line in the second construction phase the plant is expected to process around 300,000 m³ of roundwood per annum.

Troyes will be Garnica's second production site in France. The company has already been operating a peeled veneer plant processing poplar in Samazan (Nouvelle-Aquitaine) since 2010. In Spain, Garnica produces plywood at five locations. The company currently employs 1,287 persons. Turnover in 2021 amounted to approximately €272m (2020: €217m).

UPM investing €10m in its Joensuu plywood mill

UPM-Kymmene Corp, based in Helsinki, has announced that its Plywood division intends to invest €10m in its Joensuu birch plywood mill, which has a designed annual capacity of 55,000 m³. Along with building a 720 m² production hall, the project will entail installing additional equipment. The Joensuu mill had already undergone a variety of modernisation

projects in recent years. For instance, an older combined heat and power plant was replaced by a new energy plant by the beginning of 2020.

Employing 170 people, the site specialises in making birch plywood and plywood components for industrial applications. In addition to cargo area floors for heavy-duty trailers, the products include insulating elements for LNG tankers for transporting liquefied natural gas.

Steico ditches plans for project near Landsberg



Steico site in Czarnkóu

(Photo credit: Steico)

The insulating material and LVL manufacturer Steico SE, based in Feldkirchen, Germany, informed the municipality of Penzing, located in the Upper Bavarian district of Landsberg/Lech, in writing in early December that it was not moving forward with preliminary plans to build a new insulating board plant in the hamlet of Stillern.

Steico had already submitted an initial request about a greenfield investment to the municipality of Penzing at the end of 2020. According to the plans at the time, the project was to be carried out in a wooded area near the hamlet of Stillern. a few kilometres southeast of Penzing. The plans unveiled in the first half of the year envisaged building a new plant on an area of 26 hectares, where insulating materials were initially supposed to be made by about 230 employees; LVL manufacturing was to be added at a later stage. Major protests were staged in the vicinity of the new site after the Penzing municipal council decided to draw up a project-related development plan in June. A citizens' initiative with 1,800 signatures petitioned the Bavarian parliament at the end of September. The petition committee then prepared a citizens' petition in November, which became invalid after Steico dropped the plans.

Steico currently operates three plants in Czarnków and Czarna Woda (both in Poland) and in Casteljaloux, France. These facilities have been gradually expanded in recent years. The company started building another insulating board plant in Gromadka, Poland, in the second half of 2021. In addition to Penzing, Steico examined other locations in Germany and abroad for its fifth plant.

Soprema specifies plans for second production line

French Soprema S.A.S. (Strasbourg) intends to commission a second production line at the Pavatex insulating board plant in Golbev in spring 2022. The company resumed the plans at the beginning of March 2020 and announced preparatory investments with a total volume of around €27m, which are to include necessary land purchases, construction of a wood yard and the installation of debarking equipment and wood chip production. The new line planned in this next step will produce flexible insulating mats, unlike the line that has already been in operation since April 2013, which produces pressure-resistant insulating fibreboards. Nearby the existing plant, meanwhile referred to as Golbey I, Soprema plans by 2023 on a separate plot of land to build a second plant under the project name Golbey II; the first stage will involve a production line for pressure-resistant boards. Preparatory construction work already commenced in September.

GO Lab wraps up funding for insulating panels site

The US insulation start-up company GO Lab LLC, headquartered in Belfast, Maine, is poised to start assembling the main technology in Madison, Maine after completing a US\$85m conduit bund. The project will primarily use second-hand equipment. The site will feature an insulating board line from a plant in Berga that Homanit Building Materials GmbH & Co KG closed at the end of 2018. A second-hand steam generator was also acquired in the first quarter of 2021. GO Lab ordered glueing systems and a fibre dryer and awarded a contract to modernise transferred sections of the plant from Dieffenbacher in the second quarter of 2021. The delay in funding the project has also led to the commissioning schedule being pushed back. Identical media reports suggest that the plant will initially make blow-in insulation starting in the first guarter of 2023. GO Lab intends to expand production to include insulation inserted between rafters and pressure-resistant board by the third quarter of that year.

Russian FAS authority investigates OSB prices

In mid-September 2021, following complaints from the market, the Russian antimonopoly authority FAS launched an investigation into the development of OSB prices in Russia. Investigations are directed against the companies Kronospan Bashkortostan LLC, Kronospan LLC, Kronospan OSB LLC and Kronospan GMH LLC, all of which belong to the Kronospan Group. Within the scope of preliminary investigations, the FAS ascertained that the Kronospan Group, with its two plants in Egorievsk (Moscow oblast) and Ufa (Republic of Bashkortostan), is the largest supplier on the Russian OSB market and as such holds a dominant position. A subsequent market analysis has also shown that OSB prices in Russia have increased by up to 300% during the course of 2021. These price increases far exceed the development of production costs. As a result, OSB manufacturers would have been able to achieve unjustifiably high margins at times.

In its statement, the FAS pointed out that it had examined the price development of various building products in the past months. According to the FAS, prices of various products have already fallen since investigations were initiated.

Monolit-Stroy also to commence OSB production

Russian company Monolit-Stroy LLC (Tuchkovo, Moscow oblast), which is mainly active as a project developer, is currently constructing a continuous OSB plant next to the Tomsk MDF/HDF plant located in central Siberia and operating under the name Latat. The overall contract has been awarded to the Italian Imal-Pal Group. The strander was supplied by Globus s.r.l. and Pal s.r.l. will supply not only the screens but also the strand bunkers and the forming line. Imal s.r.l. is responsible for areas such as belt drying and gluing. The company also supplied the continuous press, which is 30 m long and designed for an annual capacity of 250,000 m3. The Imal-Pal Group's scope of delivery also includes the areas downstream of the press up to the de-stacking unit as well as an automatic board storage system. Vyncke Energietechniek N.V. and Trasmec s.r.l. both companies associated with the Imal-Pal Group in the Panel Alliance, have supplied the energy system and the mechanical conveyors.

According to concurring media reports, Monolit-Stroy intends to spend about RUB5bn or the equivalent of about US\$70m on construction of the OSB plant. Commissioning was originally planned for the end of the year 2021, and the intention was subsequently to bring the plant up to full capacity by May 2022. According to current reports, however, there have been delays in the delivery of individual plant components due to corona, so that this schedule can no longer be observed.

Monolit-Stroy entered wood-based materials production business in 2017 with the takeover of insolvent MDF manufacturer 000 Partner-Tomsk. In the course of 2010, Partner-Tomsk, which had previously operated exclusively as a trading company, commissioned an MDF/HDF plant supplied by Dieffenbacher GmbH Maschinen- und Anlagenbau and equipped with a continuous press measuring 9' x 36.6 m with an annual capacity of 260,000 m³. In March 2011, a shortcycle press from Dieffenbacher Maschinenfabrik GmbH was also commissioned. Laminated HDF is further processed by Latat into laminate flooring of the Lamineli brand on a profiling line supplied by Homag GmbH. Logs for the plant are supplied by the company's own logging company. Latat also operates a glue resin plant in Tomsk. Partner-Tomsk had already planned to expand the site subsequently by a production line for OSB.



Wood-based panel mill in Tomsk

(Photo credit: Lata

One Sky plans OSB mill in Saskatchewan

One Sky Forest Products Ltd. (One Sky), a company founded by Peak Renewables Ltd., based in Cranbrook, British Columbia, in cooperation with several local investors and 10 First Nations, intends to build an OSB mill in Prince Albert, Saskatchewan, over the next two years. The project has been in preparation since the middle of 2020. On 8 September 2021, the provincial government of Saskatchewan approved timber supply for the mill under the Forest Resources Management Act. According to One Sky, around 845,000 m³ of pulpwood will be needed for the mill to run at its planned annual capacity of around 600m soft (3/8" basis) or about 530,000 m³. This timber will primarily come from the forest commission for Saskatchewan Province. What is more, forests owned by the First Nations and other private owners in the region around Prince Albert will supply timber to the mill. According to Peak Renewables, construction work on the new OSB mill is slated to begin in the third quarter of 2022, with commissioning scheduled for the end of 2023. The project is to entail a total investment of some CAD250m.

The main investor, Peak Renewables, was founded by Brian Fehr, the former CEO of The Bid Group, based in Prince George, British Columbia, as recently as the third quarter of 2020. A short time later, the firm acquired the assets of an OSB mill in Fort Nelson, British Columbia, shut down in June 2008 and technology from the Tackama plywood mill, which closed in October 2008, from Canfor Corp., headquartered in Vancouver, British Columbia. The OSB mill, which Canfor operated under the Polar Board name, last had an annual capacity of around 650m sqft with a ten-opening press.

West Fraser set to invest US\$350m in Allendale

West Fraser Timber Co. Ltd., based in Vancouver, British Columbia, has announced that its NA Engineered Wood Products division hopes to significantly improve its market position in the south and south-east of the US by buying an OSB mill in Allendale, South Carolina. The mill's previous owner, Georgia-Pacific Wood Products LLC, based in Atlanta, Georgia, had idled the site indefinitely at the end of 2019. Until now, West Fraser has been represented in this region by its OSB mills in Joanna, South Carolina (annual capacity: 650m sqft or 575,000 m³), Cordele, Georgia (1.040bn sqft or 920,000 m³) and Huguley, Alabama (500m sqft or 440,000 m³). Commissioned in October 2006, the Allendale mill was originally supposed to make up to 1bn sqft (3/8" basis) or about 880,000 m³ using a 12 x 26 ft, 16-opening press delivered by Dieffenbacher GmbH Maschinen- und Anlagenbau. West Fraser put its current annual capacity at roughly 760m sqft or 675,000 m³.

Under the terms of the agreement struck in the second half of October 2021, West

Fraser will pay Georgia-Pacific around US\$280m for the Allendale mill. In a press release issued on 26 October, West Fraser added that it would invest another US\$70m or so in modernisation work needed to restart the mill, putting the total investment at approximately US\$350m. West Fraser noted that this figure is much less than the amount that would be needed for an equivalent greenfield OSB mill and requires less time to add capacity. The new owner said that relatively low pulpwood prices in the vicinity were also strong points for the acquisition of the Allendale mill. Once optimisation work has been completed, Allendale should become one of the group's lowest-costs OSB mills, West Fraser added.

Work to prepare for the restart will take around nine months, plus another 18 to 24 months to ramp up the mill to full production. However, West Fraser has yet to unveil an exact timetable for the start-up of Allendale. The company said that it could draw on the lessons learned during previous restarts of idled mills in the project, for instance, in Jefferson, Texas (2013), Huguley (2017) and most recently in Chambord, Québec (March 2021).

LP finally abandons conversion plans at Val d'Or

Louisiana-Pacific Corp (Nashville, Tennessee) has finally abandoned plans to convert its OSB plant in Val-d'Or (Québec, Canada) to sidings. The plant has been shut down since mid-2012. According to information from Radio Canada, the site is to be sold to wood-based panels manufacturer Uniboard Canada Inc. (Laval, Québec), which operates a particleboard and glue resin plant on an adjacent site. According to the news of 12 November, Uniboard intends to use the plot of land for further expansion of its own site.

The Uniboard chipboard plant, built in 1977, had been gradually modernised in recent years. After Uniboard had renewed the wet chip preparation and drying systems between 2015 and 2017, investments were made in the dry chip preparation area in 2018 and 2019. As a next step, the existing multi-daylight press, which has an annual capacity of 226m sqft (base 3/4") or 400,000 m³ with a 10-daylight 8 x 20 ft press, is to be replaced by a continuous production line. In the course of last year the project,

which has been in preparation for some time, was defined in more specific terms.

Louisiana-Pacific has already started dismantling the production facilities in Val-d'Or. The dismantled equipment is either to be scrapped or relocated to other sites. The company took over the plant from Canadian company Norbord Inc. (Toronto, Ontario) at the end of 2016 and, at the same time, relinquished the site in Chambord (Québec), which was also not in use at the time. According to plans at the time, the plant, which was designed for an annual capacity of 340m sqft, was to be converted to production of SmartSide strand sidings within two years. This project was subsequently abandoned, as was the planned construction of a new siding plant on the site of the former Ainsworth plant in Cook (Minnesota). Instead, Louisiana-Pacific has pursued expansion of siding capacities through conversion of the OSB/LSL plant in Houlton. Strand siding production is scheduled to start there by the end of the first quarter of 2022. After that, as announced in February, conversion of the Sagola (Michigan) OSB plant to sidings will commence.



Huber Engineered Woods LLC (HEW), an OSB manufacturer based in Charlotte. North Carolina, that is owned by J.M. Huber Corp., submitted a revised environmental assessment worksheet (EAW) for a new OSB mill planned in Cohasset, Minnesota site on 18 January 2022. Media reports concurred that this revision had become necessary after several objections to the greenfield project. For instance, the West Fraser Group, which operates the Bemidji OSB mill about 120 km away in Solway, Minnesota, with an annual capacity of 550 million sqft (3/8" basis) or about 485,000 m³, is said to have expressed doubts about there being enough roundwood available to operate both mills.

According to the latest EAW, the Cohasset OSB mill should be designed to make

725,000 sqft each year. In the initial version submitted in September, Huber had listed a somewhat higher annual capacity of 785,000 sqft. The revised document also added specific information about planned roundwood use. When running at full capacity, the mill will reportedly process a total of 400,000 cords of roundwood annually. According to Huber, the mill would manufacture wall and roof sheathing, integrated structural panels and high-performance subflooring.

The new EAW also adjusted the timetable for the period until the OSB mill is commissioned. Building work is to begin in the second quarter; a start date in autumn 2021 was the goal when the project was unveiled in June 2021. As a result, the OSB mill will not be able to start production before the end of 2023, as originally planned. Instead, Huber thinks that commissioning will not be completed until 2024.



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Twelve member states voted against anti-dumping measures for Russian plywood

EU Commission confirmed birch plywood duties in November 2021

Since November 2021, imports of Russian birch plywood into the EU are subject to definitive anti-dumping duties of 14.4-15.8%.

The EU Commission Implementing Regulation (EU) 2021/1930 was published in the EU Official Journal on 9 November 2021. The EU Commission has thus largely confirmed the preliminary punitive duties, which had ranged between 15.0-15.9%. The final decision meant that financial securities deposited by European plywood importers in connection with the preliminary anti-dumping duties were collected; only amounts exceeding the definitive duties were released. Individual duty rates have been stipulated for three Russian producers: Syktyvkar Plywood Mill 15.72% (preliminary duty 15.0%), Zheshartsky LPK 15.8% (15.3%) and Sveza Group 14.4% (15.9%). Duty rates of 14.85% (15.7%) have been stipulated for other companies cooperating in the investigation. For all other companies, a duty rate of 15.8% (15.9%) applies. The antidumping measures apply for five years and expire on 10 November 2026.

Over the last year, in addition to Russian plywood producers, various European import traders and processors had also spoken out against the measures and made statements in the proceedings. The Gesamtverband Deutscher Holzhandel (GD Holz), Berlin, has also campaigned at the EU Commission and the Federal Ministry for Economic Affairs and Energy (BMWi) for the anti-dumping duties to be lifted. According to the association, a discussion at member state level, which is rather unusual in such a procedure, took place in mid-October. In the subsequent vote, twelve member states apparently voted against the anti-dumping duties. Three countries are said to have abstained. In order to prevent implementation of the measures, 14 of the total 27 EU



member states would have had to cast a negative vote.

However, temporary suspension of the anti-dumping duties was still possible after the final decision. The EU Commission had brought up this possibility, which is regulated in Article 14(4) of Regulation (EU) 2016/1036, in August. On 18 August, the European Commission invited parties involved or interested in the proceedings to comment on market developments in the period from July 2020 to July 2021. These comments were supposed to help the institution to assess whether market conditions had changed significantly compared to the investigation period, which ran from 1 July 2019 to 30 June 2020 and had been the basis for anti-dumping proceedings, and whether renewed injury to the EU plywood industry had thus become unlikely. In this scenario, punitive duties could have been temporarily suspended. The European Commission later notified its intention to impose definitive punitive duties on 31 August. This was followed by a further communication on 11 October stating that the institution was no longer considering suspending the measures. In both cases, though, interested parties were granted new deadlines to make their views known. In December the European Commission decided, not to suspend the anti-dumping measures on Russian birch plywood

Anti-dumping proceedings were launched in October 2020 at the initiative of several European plywood producers. Conclusions included, for example, that import prices had fallen by around 10% during the investigation period and that Russian producers had been able to significantly increase their market share. Since the end of 2020, however, import prices for Russian birch plywood have again risen considerably and, by the end of the third quarter of 2021, exceeded the previous peak figures recorded in 2007.

MV Onego Trader was loaded with 10,000 m³ of plywood in the port of Paranaguá

First breakbulk ship from Brazil docked in Bremerhaven port end of January

Breakbulk vessel MV Onego Trader sailed into the international port in Bremerhaven on 30 January with its load of around 10,000 m³ of elliotis pine plywood after a 20-day sea voyage.

The ship docked at Heuer Logistics GmbH & Co KG, which specialises in general cargo and project shipments. The process of unloading the plywood began via the ship's four loading hatches the day after arrival. It took almost a fortnight to load the vessel in the port of Paranaguá, Paraná from the end of December to 10 January, but unloading was completed after just three days on 2 February.

According to the companies involved, professional stowage services in the port of departure and favourable weather conditions in Bremerhaven allowed them to work quickly. As a result, up to 24 plywood bundles were lifted using the loading hatches with one crane lift and deposited on the quay. From there, forklifts transported the plywood to adjacent warehouses or

marquees. This temporarily stored plywood is in at least comparable condition to plywood from container shipping; no significant damage occurred during sea transport or during the unloading process. Once unloading was completed, the MV Onego Trader, sailing under the Portuguese flag, departed Bremerhaven; its next stop was the Polish port of Szczecin.

Preliminary talks about the first breakbulk shipment of elliotis pine plywood from Brazil had been held since October. At the beginning of December, the companies involved had agreed on the first shipment of this kind. Starting in late December, the MV Onego Trader was loaded with around 10,000 m³ of plywood in the port of Paranaguá, Paraná. Loading was finished on 10 January. Several Brazilian producers provided the plywood. About three guarters came from Repinho Reflorestadora de Madeiras e Compensados Ltda., based in Guarapuava, Paraná, and Indústria de Compensados Sudati Ltda., headquartered in Palmas, Paraná. Guararapes and Sudati claim to have been handling breakbulk shipments to North America for more than 20 years. These shipments have been expanded over the past year. Conply Indústria de Compensados Guararapes Ltda. (Contenda), Guaranile Madeiras Ltda. (Guarapuava) and VW Indústria e Comércio de Madeiras Ltda. (Coronel Vivida) also loaded plywood onto the MV Onego Trader. The breakbulk shipment was organised via the logistics service provider Kühne+Nagel International AG (Schindellegi, Switzerland).

The first breakbulk shipment is primarily seen by the companies involved as a test run offering an alternative to increasingly unreliable container shipments to and from South America in recent months. Freight rates for 40 ft containers, which had been relatively low for a long time, had initially increased only slowly from spring 2021 onwards. These rates then rose more and more in the second half of the year. At the same time, delays became longer and longer. Shipments in December and January were already subject to container freight rates of US\$6,000-7,000, plus surcharges of US\$1,000-1,500 for guaranteed shipping. Breakbulk shipping is hardly cheaper due to the additional cost of loading and unloading, but it can provide relief at least in terms of volumes given the supply issues currently encountered by European buyers of elliotis pine plywood.

When opting for this first shipment, the companies involved had already indicated the possibility of more breakbulk shipments from Brazil if things went according to plan and container shipping constraints endured. At the moment, there are no plans for additional ships, but this option cannot be ruled out if container shipping delays persist. By contrast, breakbulk shipping is now an established transport method for importing plywood from China; Kühne+Nagel alone organised six ships carrying plywood and other products last year.



Loading of elliotis pine plywood in the port of Paranaguá.

(Photo credit: Sudati)

Softwood plywood manufacturing decreased by 7% over the past ten years

North America: OSB production topped 21m m³ in the full year of 2021

North American OSB production reached a new record high level in 2021.

According to the APA-The Engineered Wood Association, based in Tacoma, Washington, output increased by 4% to 21.199m (2020: 20.457m) m³, solely because of increased manufacturing at mills in Canada (+9% to 7.282m m³) and

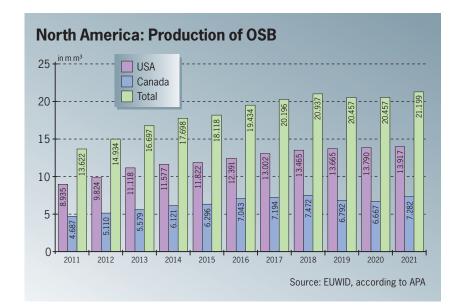
the northern US (+7% to 2.576m m³). OSB mills in the south/southeast of the US recorded unchanged output of 11.341m m³. The three regions had encountered only minor changes in 2020 as a whole; overall, output was exactly the same as in 2019.

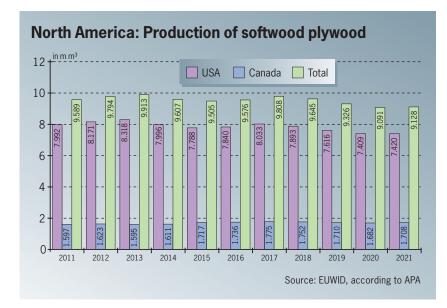
North American OSB production had declined for the first time in ten years in 2019

(-2% to 20.457m m³). APA figures show that production decreased by 24% from 16.469m m³ in 2008 to 12.533m m³ in 2009. This plunge was primarily caused by the closure or indefinite shutdown of numerous mills. Production then gradually rebounded in subsequent years as markets recovered. After a 9% growth in the previous year, output had stayed virtually the same between 13.614m m³ in 2010 and 13.622m m³ in 2011. US manufacturing even rose at double-digit rates in the next two years after several mothballed mills came back online (2012: +10% to 14.934m m³, 2013: +12% to 16.697m m³). This upward trend had then continued at a slightly slower pace until 2018 (2014: +6% to 17.698m m³, 2015: +2% to 18.118m m³, 2016: +7% to 19.434m m³, 2017: +4% to 20.196m m³, 2018: +4% to 20,937m m³). Over the last ten years, this translates into an upturn of 6.265m m³ or 42%.

Softwood plywood production had tumbled by 16% to 9.087m m³ in 2009. Echoing what happened for OSB, 2010 saw things move in the opposite direction: output was 7% higher at 9.705m m³. However, the next few years showed only minor changes in either direction. A downturn emerged in 2018 (2018: -2% to 9.645m m³. 2019: -3% to 9.327m m³, 2020: -3% to 9.091m m³), which only halted last year. According to the latest APA statistics, softwood plywood output was slightly above the previous year's level again at 9.128m m³. Softwood plywood manufacturing thus decreased by 666,000 m³ or 7% over the past ten years.

Total structural panel production, which slipped slightly in both 2019 (-3% to 29.784m m³) and 2020 (-1% to 29.548m m³), rebounded by 3% to 30.327 m m³ last year. 2018's output of 30.582m m³ has not yet been reached in full again. Total output also topped the 30m m³ mark in 2017 at 30.004m m³.





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Over 550,000 m³ imported from Latvia, Romania, Russia and Belarus in 2021

Lower prices in North America have slowed US OSB imports in December

A slump in North American OSB prices that surfaced in July and August 2021 and the subsequent reversal in fortunes have had a mixed impact on imports from Europe.

Shipments from Latvia initially increased in October and November. Latvia provided the US with more OSB in these two months (70.039 m³) than in the entirety of the third quarter (68,682 m³). Imports more than doubled from October (22,958 m³) to November (47,081 m³). On the other hand, foreign trade statistics from the US Department of Agriculture's Foreign Agriculture Service (FAS) show that no OSB from Latvia arrived at US ports in December. Imports from Romania, which had almost caught up with those from Latvia in the third quarter (67,876 m³), temporarily ground to a standstill in November. Romania had delivered just 7,443 m³ to the US in October. The tide turned again in December with shipments of 15,247 m³; Romania was the sole relevant OSB supplier from the EU-27 in the final month of 2021.

Looking at the fourth quarter as a whole, the US imported 1.519m (Oct.-Dec. 2020: 1.282m) m³ of OSB. October accounted for 559,818 (455,837) m³ and November for 509,433 (403,737) m³. Both months saw similar year-onyear growth rates of 23% and 26%, respectively. December showed a weaker overall trend with a 6% growth to 449,499 (422,812) m³. The EU-27 delivered 97,929 (23,479) m³ to the US in the fourth quarter. Some 70,039 (16,473) m³ or 71.5 (70.2) % of this amount came from Latvia and 22,690 (6,955) m3 or 23.2 (29.6) % from Romania. The FAS statistics indicate that imports from the CIS reached 71,229 (3,406) m³, with Russia the only relevant supplier country with 71,158 (3,398) m³. Canada delivered 1.347m (1.252m) m³ of OSB to the US in the fourth quarter, 88.7% of the total volume. The EU-27 accounted for 6.4%, and the CIS region for 4.7%.

OSB imports from the EU-27 and the CIS region had been well above the previous year's levels in the first three quarters of 2021, as well. Deliveries from the EU-27 initially remained rather low in the first quarter of 2020, but had consistently been in five digits from the second quarter onwards. Following a minor dip in the third and fourth quarters of 2020, EU member states delivered more and more during 2021; the fourth quarter was the only quarter to see a downturn in volumes. Latvia was the largest EU supplier in all eight quarters of 2020 and 2021; Romania only came close in the third quarter of 2021. Romania had also surpassed Latvia in a few months, most recently in December, Deliveries from the CIS region only really got going in the second quarter of 2021. Belarus was ahead of Russia at first, but the two countries swapped positions in the fourth quarter.

US imports of OSB from the EU-27 more than quadrupled in a year-on-year comparison to 394,523 (2020: 96,048) m³ in 2021 as a whole on the back of strong growth in all four quarters. Some 61.1% or 241,179 (66,567) m³ of EU imports came from Latvia; Romania accounted for 140,942 (17,284) m³ or 35.7% of EU shipments. Romania had been the biggest EU exporter up until 2018; Latvia has been in the lead since 2019. Imports from the CIS region primarily come from two countries: both Russia and Belarus saw their shipments skyrocket to 113,977 (3,478) m³ and 57,757 (25) m³ in 2021, respectively. The Far East was the third-largest overseas supplier last year with 30,272 (1,341) m³. The UK took fourth place thanks to the Norbord deliveries that arrived in August. South America accounted for 6,918 (1,816) m³; Brazil was the main supplier there with 5,286 (857) m³.

USA: OSB imports

m³	2016	2017	2018	2019	2020	2021
North America	5,061,033	5,504,747	5,667,857	5,370,869	4,962,174	5,529,173
Canada	5,061,033	5,504,738	5,667,828	5,370,869	4,962,174	5,529,092
EU-27	5,595	56,921	33,193	44,634	96,048	394,523
Latvia	238	0	0	27,009	66,567	241,179
Romania	5,180	56,016	28,021	3,013	17,284	140,942
CIS	6	4,572	3,313	3,513	3,511	171,916
Russia	6	2,780	3,313	0	3,478	113,977
Belarus	0	1,792	0	3,513	25	57,757
East Asia	109	3,460	7,153	3	1,341	30,272
China	109	3,460	7,153	3	1,341	30,245
United Kingdom	3	0	0	0	0	14,242
South America	0	6	167	0	1,816	6,918
Total	5,067,228	5,569,706	5,711,925	5,419,267	5,065,500	6,148,392

The differences to the intermediate sums and the total sum derive from the data for the countries which are not listed separately.

Source: EUWID, according to US Department of Agriculture, FAS

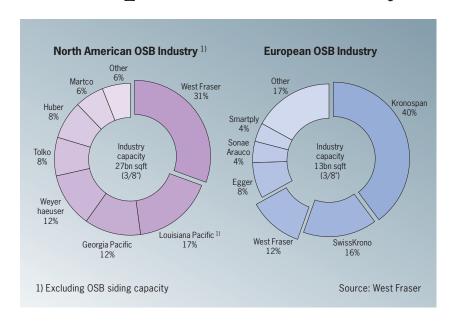
The two companies are the leading OSB producers in North America and Europe

Kronospan bought a 6.8% stake in West Fraser between April and February

Banasino Investments Ltd., an investment firm based in Nicosia, Cyprus, that is affiliated with the Kronospan Group, has acquired a 6.8% shareholding in the Canadian wood-based panel and sawn timber producer West Fraser Timber Co. Ltd., headquartered in Vancouver, British Columbia, in several share purchases.

According to a mandatory notice to the US Securities and Exchange Commission published at the start of February 2022, the group purchased a total of 7,144,294 shares in West Fraser in several transactions between 9 April 2021 and 3 February 2022. Banasino Investments' subsidiary ECCM Bank plc, based in Sliema, Malta, bought 315,975 shares in a first step between 9 April and 15 April; the purchase price was put at CAD29.2m. Banasino Investments made additional direct share purchases by 3 February, handing over CAD748.6m in exchange for 6,828,319 shares. Altogether, Banasino Investments and ECCM Bank spent CAD777.9m on buying these shares. Funding came from the two companies' working capital and from loans provided by Kronospan Holdings Ltd., Kronospan Holdings East Ltd. and Kronospan Finance Ltd., all based in Cyprus.

Kronospan Group currently has two production sites in North America, located in Eastaboga, Alabama, and Shippenville, Pennsylvania. The group first built the MDF/HDF mill in Eastaboga in a greenfield investment, with commissioning taking place in March 2008. In subsequent investment phases, Kronospan added resin manufacturing, treating, laminating and laminate flooring production operations to the site. Eastaboga has also made particleboard since October 2019. The MDF/HDF and laminate flooring mill in Shippenville became part of the company in December 2015 when Kronospan acquired Clarion



Boards Inc. and Clarion Laminates LLC after a bidding process lasting several months. Aconcagua Timber Co. Panels Inc. (ATC Panels) was the seller. Some time ago, Kronospan set its sights on building an OSB mill as its next expansion project in the US, but these plans have been delayed several times. Instead, the company has ramped up its OSB exports to North America more and more over the past two years. Until now, these shipments have primarily come from mills in Riga (Latvia) and Brasov (Romania). To a lesser degree, the company had also exported OSB from its mills in Sanem (Luxembourg), Strzelce Opolskie (Poland) and Mogilev (Belarus) to the US. Kronospan also operates additional OSB mills in Jihlava (Czech Republic), Bourgas (Bulgaria), Novovolynsk (Ukraine), Egorievsk (Russia), Ufa (Russia) and Kastamonu (Turkey). The company has started installing another OSB line in Rivne, Ukraine, although this project had to be halted for the time being after Russia invaded Ukraine. With 11 mills at the moment, Kronospan is Europe's largest OSB manufacturer by quite some margin. In a recent investor presentation,

West Fraser put Kronospan's share of the European market at around 40%.

West Fraser's NA EWP division currently operates 13 OSB mills in the US and Canada. The company believes that it has a market share of around 31% in North America, putting it well ahead of the next-largest OSB manufacturers: Louisiana-Pacific Corp. (Nashville, Tennessee) with 17%, Georgia Pacific Wood Products LLC (Atlanta, Georgia) and Weyerhaeuser Co. (Seattle, Washington) with 12% each. West Fraser intends to strengthen its foothold in the south-east of the US and in North America as a whole with its early December 2021 purchase of an OSB mill in Allendale from Georgia-Pacific. This mill has been offline since the end of 2019 and is slated to resume operations until the end of 2022. West Fraser's Europe EWP division operates two OSB mills in Inverness-Morayhill, UK, and Genk, Belgium, which were modernised and upgraded in several replacement and expansion projects in recent years. With a 12% share of the market, West Fraser now claims to be Europe's third-largest OSB manufacturer after Kronospan and Swiss Krono Group.

Plans involve adding a second strand preparation line and extending the press

Swiss Krono to expand Hungarian OSB mill to a capacity of 600,000 m³

Swiss Krono Group intends to carry out a significant increase in its OSB capacity in Vásárosnaményi, Hungary.

This move comes after the company has largely finished expanding its OSB line in Wittstock-Heiligengrabe, Germany, and amidst plans for a new investment in Sharya in the Russian region of Kostroma. The line delivered to the Hungarian complex by Siempelkamp Maschinen- und Anlagenbau GmbH during 2015 and commissioned in early June 2016 was designed to have a daily production capacity of 1,060 m³ in the first phase using a 9 ft x 28.8 m continuous press. Until now, it has had an annual output of just over 350,000 m³, depending on the product range.

During the original design process, Swiss Krono Group had also made preparations to install a second strander and a second dryer, expand the forming machine, install a ContiBooster mat pre-heating system and extend the press. These plans, which have now been fleshed out, involve adding

a second strand preparation line, extending the press by 12 m and expanding the energy plant. Within the final assembly area, the tongue/groove unit is to be expanded, too.

Where possible, this work is to be performed during 2022, although the exact timetable depends on when technology orders are wrapped up and deliveries scheduled. Swiss Krono Group intends to have an annual production capacity of almost 600,000 m³ at its Hungarian location in 2023 at the latest. Under the latest plans, which were presented at a meeting with Hungary's Foreign Minister Péter Szijjártó on 19 October, the project will entail an investment of HUF17bn or almost €47m.

Swiss Krono Group has decided to expand the OSB mill in Hungary amidst an improvement in the timber supply situation in recent years. Poplar wood was originally supposed to be used as the primary raw material for making OSB in Vásárosnaményi. Demand was to be met using deliveries from Hungarian state and

privately-owned forests, but also using imports from Ukraine. These imports are no longer an option because of restrictions that have been in effect for some time now. Swiss Krono Kft. managed to offset this shortfall by sourcing more within Hungary. At the same time, the wood mix has been adjusted. Poplar now accounts for around 50% of the wood used at the mill, with the other 50% split between spruce and pine. A few OSB grades are still made solely using poplar, such as the "OSB/3" sensitive" product line. Fine fractions generated during chipping roundwood are also used in the core layer for some of the OSB made in Vásárosnaményi. Until now, the Hungarian mill has not used recycled chips in the core layer, but this might be an option in the medium term.

The capacity increase in Vásárosnaményi is one of several projects that Swiss Krono Group is carrying out to raise its OSB capacity dramatically in the years ahead. The OSB line at Swiss Krono GmbH in Heiligengrabe was modernised and expanded in several increments over the past two years. The final individual project has been the installation of a third strander by December. The mill should be able to make up to 600,000 m³ per year in the future as a result, depending on the product range. A similar project is in the pipeline at Swiss Krono S.A.S., headquartered in Sully-sur-Loire, France. The final investment decision has yet to be made, though. The firm has already started preparing to expand the energy plant in preparation for this move. The filter system was overhauled during an extended inspection stoppage in October. A long-planned project to add an OSB line to the Sharya mill has been started last year after initial delays. The start-up of the line, which has a designed annual capacity of around 600,000 m³, was slated for the first half of 2023, but is now uncertain due to the current situation in Russia.



OSB line in Hungary

(Photo credit: Swiss Krono Group)

Sawmilling company is planning to invest €150m on a new site near Grafenwöhr

Ziegler Group to start insulating board production in August 2022

Ziegler Holding GmbH, based in Plößberg, Germany, commenced work on an insulating board factory planned by Naturheld GmbH at the start of September 2021.

The first phase entailed clearing trees from the 25 ha site on the Hütten-North business and industrial estate near Grafenwöhr, Germany. Preparatory construction work followed. Construction on the production and storage halls got underway before the year's end. Technology assembly has begun in March 2022. Under plans that were upgraded again in the spring and the summer, Ziegler will install three production lines in the new plant in the first phase. A line to make pressure-resistant wood-fibre insulating board ("line 1") is to make its first piece of board in August 2022. At the same time, Ziegler plans to start manufacturing blow-in insulation ("line 3"). A line making flexible insulating mats ("line 2") is scheduled to begin manufacturing in September 2022. The 4 ft-wide line making pressure-resistant insulating board was designed to have a maximum annual capacity of 500,000 m³. The 8 ft-wide insulating mat line should make up to 1.5m m³ per year. Ziegler put the blow-in insulation line's maximum capacity at around 20,000 t/year. Two pressurised refining systems will be installed to make the fibre needed for all three lines. With a 44" refiner, each of the two systems is to have an hourly capacity of 10 t. One refiner is to serve the insulating mat line; the second will produce fibre for the insulating board line and blow-in insulation. The refiner system can have an hourly output of up to 2 t for blow-in moulding, depending on what type of insulating board the line makes.

Once it is running at full speed, the factory will process up to 1m loose m³ of wood chips delivered from a sawmill operated by Ziegler Holzindustrie GmbH & Co. KG, based in Plößberg-Betzenmühle, Ger-



Ziegler sawmill in Betzenmühle

(Photo credit: EUWID)

many. This sawmill has six production lines and an installed annual capacity of 2.2m m³. Two fibre dryers will be located downstream of the pressurised refining systems. The next production stage, featuring a forming station, calibration unit, edging, sizing and downstream processing technology, covers a total area of around 13,000 m² in three hall areas. Four warehouses, each 3,000 m² in size, are being built to hold the finished board, bringing the total storage area to 12,000 m². The heat needed to operate the insulating board plant is to be provided by a biomass-fired heating plant with two boilers that each have a capacity of 19.5 MW. With three production lines and all pieces of upstream and downstream technology, the complex will occupy an area of around 11 ha, almost half of the entire site. The remaining area is to be used for upgrade projects at a later stage.

The Ziegler Group said that it intends to invest approximately €150m in setting up the insulating board factory, which will have a designed annual capacity of rough-

ly 2m m³. Once it is up and running, the plant will employ around 100 people. The Ziegler Group had only just started preliminary planning for its foray into insulating board production at the end of September 2020. Initial talks with potential machinery and plant suppliers got underway in October. The first technology orders based on these plans were placed in spring 2021. Dieffenbacher GmbH Maschinen- und Anlagenbau is supplying the production line for pressure-resistant insulating board. An order for a pressurised refiner system placed with Andritz AG in the first guarter was duplicated later. The Ziegler Group ordered a flex line from Grenzebach BSH in August. Two separate final processing lines will be delivered by Anthon GmbH Maschinen- und Anlagenbau. Anthon's partner Homag GmbH will provide a profiling line for pressure-resistant board. The bagging system for blow-in insulation will come from Willems Baling Equipment. Urbas Maschinenfabrik Ges.m.b.H. will build the biomass-fired heating plant, with Schrader Apparatebau GmbH delivering an evaporation plant.

Panattoni acquires Kronospan premises



(Photo credit: Panattoni)

In the bidding process conducted since autumn 2019 by the Munich branch of real estate service provider Jones Lang LaSalle Inc. for the 175,000 m² business premises of former Kronospan particle-board business in Bischweier, the offer of project developer Panattoni Europe was already accepted in mid-2021. According to unconfirmed information, an agreement in principle concerning the sale of the premises has already been signed by Panattoni Germany Properties GmbH

(Hamburg) and the Kronospan Group;

transfer of ownership is to take place

after signing of the final contracts.

Kronospan has meanwhile started to dismantle remaining production equipment on site. Equipment includes the multidaylight press commissioned in 1969, which Kronospan had shut down prior to commissioning its new continuous press in the summer of 2003, a tandem short-cycle press, which Kronospan had relocated to Bischweier from the former particleboard plant of Rhenodur Holzwerkstoff GmbH (Worms) by 2007, a vertical laminating press as well as a cut-to-size saw newly installed by Kronospan in 2005.

Once dismantling of the equipment is complete, Panattoni Europe will take down the existing buildings, most of which date back to the 1960s. The contract for demolition work has been awarded to InduRec GmbH (Weinheim), a company specialising in the dismantling of industrial complexes. This work begun in the first quarter of 2022.

The necessary demolition plan was submitted to the Bischweier municipality in mid-December. A demolition permit is not required, formal notification of the responsible district administration office in Rastatt is sufficient. Plans for the Kronospan premises are to be completely cleared by the end of the third quarter. Once this is complete, the site will be redeveloped. There are no specific plans for this so far. By whom the premises will be used in future has also not yet been announced by Panattoni Europe, a company specialising in the development of logistics and industrial real estate.

Kronospan had shut down production in Bischweier indefinitely in the first quarter of 2011. Following the mid-2019 decision to permanently abandon the site, the particleboard line built in 2003 and expanded in mid-2008 was dismantled and temporarily stored on the site from October 2019 to April 2020. Subsequently, equipment and machinery were relocated to the newly established Kronospan site in Rivne (Ukraine) and re-assembled there.

Kronospan commissions Rivne particleboard mill

Kronospan commissioned a particleboard mill built in Rivne, Ukraine, before the end 2021. Unconfirmed reports suggest that the first piece of particleboard has already been made. Kronospan used key production machinery from a mill closed in Bischweier, Germany, in the first quarter of 2011 to build the Rivne mill. The Bischweier facility was dismantled between October 2019 and April 2020 and then moved to Ukraine. This second-hand machinery was supplemented by a variety of new components. Kronospan has installed two short-cycle presses delivered by Wemhöner Surface Technologies GmbH & Co. KG in Rivne. In a second phase, work to assemble an OSB line in Rivne has already begun. Earlier information suggests that commissioning is slated for the second half of 2022.

Kronospan plans second particleboard site in Spain

Following the September 2012 takeover of affiliated companies Interbon S.A. (Burgos) and Unopan Tableros de Fibra S.A. (Sala de los Infantes) as well as the subsequent modernisation and expansion of particleboard and MDF/HDF production at these plants, the Kronospan Group is planning to build a particleboard plant near the town of Tortosa (Tarragona province) halfway between Barcelona and Valencia. The necessary land purchases have already been completed. Construction work started in January 2022. According to a statement issued at the beginning of October 2021 by the government of the Catalonia region following a meeting with Kronospan, the company intends to invest around €180m in the project and create around 180 direct jobs. According to Javier Macicior, managing director of Kronospan Spain S.L., the plant should be operational by as early as the end of 2022. Supply to customers in the northeast of Spain and the southwest of France should thus be improved.

According to as yet unconfirmed information, waste wood is to be used as a primary raw material in Tortosa. Supply is to be ensured, for example, via the metropolitan areas of Barcelona and Valencia, each about 180 km away. Orders for the main production facilities have already been placed. The forming and press line is to be supplied by Siempelkamp Maschinen- und Anlagenbau GmbH, which will be supplying a wood-based panel facility directly to Kronospan for the first time in a considerable period. Each of the last wood-based panel projects realised with Siempelkamp had involved the GIM Export Group GmbH & Co. KG. Parallel to the order for the new particleboard line, Kronospan ordered an MDF/HDF thin-board line from Siempelkamp for its Russian Elektrogorsk location. The expansion of the MDF/HDF and OSB plant in Sanem (Luxembourg) to include a particleboard line, which has been in preparation for a considerable period, and the planned construction of a facility at the Italian coating plant San Vito al Tagliamento represent two further particleboard projects currently underway in the Kronospan Group.

EIA for new Kronospan MDF mill in Zvolen

Kronospan filed an application with the Slovakian Ministry of Environment for an environmental impact assessment for an MDF mill planned in Zvolen back at the start of 2021. According to the submitted paperwork, the new mill is to make MDF 6-38 mm thick and have a designed annual capacity of around 450,000 m³. Work to build the mill is to commence within two years of receipt of the required permits. It will then take another 18 months for commissioning to take place.

Kronospan s.r.o. currently operates a particleboard line in Zvolen, which features an 8 ft x 45 m Contiplus press from Shanghai Wood-Based Panel Machinery Co. Ltd. (SWPM) that was commissioned in October 2007 and has an annual capacity of around 600,000 m³. The new line replaced an older multi-opening line with a capacity of around 180,000 m³ per year. After ramping up the new production line, Kronospan closed a particleboard mill with an annual capacity of some 250,000 m³ in Presov, Slovakia, in early 2009. Kronospan gained the mill in Zvolen in June 2003 when it acquired particleboard operations from the beech converter Bucina a.s.

Swedbank provides around €85m for new Homanit plant

Swedbank AB (Vilnius, Lithuania) will provide a loan of approximately €85m for the MDF/HDF project planned by UAB Homanit Lietuva at its Pagirai site. Both companies signed the credit agreement in mid-September 2022.

Homann Holzwerkstoffe GmbH (Munich), had been planning an expansion into the Baltic States for a considerable period already, and had examined various models to achieve this. In October 2020, the company purchased an industrial area covering approximately 77 ha for the greenfield project. Construction work has been underway since October. The commissioning of the plant, which is designed for an annual capacity of 310,000 m³, is planned for autumn 2022.

Zary restarted particleboard production

Swiss Krono Group resumed raw particleboard production at its mill in Zary, Poland, on 1 March 2022, almost four weeks earlier than expected. The particleboard line had been taken out of service on 19 December after the dryer caught fire. The blaze had damaged the drum and its fittings inside a dryer delivered in the mid-1990s by the company then known as Schenkmann & Piel Verfahrenstechnik GmbH & Co. KG. The drum and fittings had to be dismantled to perform repairs. Components were then subsequently reassembled. Swiss Krono Group had initially anticipated that production would be offline until the end of February, A stoppage lasting around three months had even been feared at the start of January. However, repairs were wrapped up more quickly than expected after all.

Swiss Krono Group supplied its laminating presses in Zary with raw particleboard from other group locations during the stoppage. At the same time, these mills started making direct deliveries to customers. Past information suggests that the Zary mill, which does business as Swiss Krono Sp.zo.o.,

can manufacture around 600,000 m³ per year using a particleboard line delivered by Siempelkamp Maschinen- und Anlagenbau GmbH and commissioned in 1995.

Swiss Krono Group also operates an OSB line, an MDF/HDF line and significant capacity to make upstream products and semi-finished and finished products, such as laminated board and laminate flooring, at the same location. Commissioned in 1997 with an annual capacity of roughly 360,000 m³, the OSB line is supposed to be expanded over the next two years. An MDF/HDF line that has run since 1998 also had a designed capacity of around 360,000 m³. Both the OSB and MDF/ HDF lines can reportedly now make up to 400,000 m³ per year. Swiss Krono also started making laminates in Zary during 2017 using a double belt press. At the same time, the group ramped up its laminating capacity. Its next investment plans provide for installing a waste wood recycling unit; the firm has yet to make a final decision about whether to expand its OSB line.

Sonae Arauco Germany replaces press in Nettgau

Sonae Arauco Deutschland GmbH (Meppen) will replace one of the three laminating lines operated at its Nettgau particleboard plant during spring 2022. For this replacement investment the company will use one of the two short-cycle presses from the MDF/HDF and laminate flooring plant in Heusweiler-Eiweiler, which was permanently closed down at the end of 2019. The machines supplied by Wemhöner Surface Technologies GmbH & Co. KG in 2006 had been used by joint venture Laminate Park GmbH & Co. KG for production of laminate flooring. Two boards in 2,600 x 2,070 m format could be pressed per cycle, also with registered embossing surfaces and deep structures. After production was terminated, the short-cycle presses at the Eiweiler plant were dismantled and temporarily stored at the Horn-Bad Meinberg site, which belongs to Sonae Industria SGPS S.A. (Maia, Portugal). The second

short-cycle press from Eiweiler will probably be relocated to a Sonae Arauco site in Spain or Portugal.

At the Nettgau plant, Sonae Arauco has so far been using three short-cycle presses, all of which had previously also been in operation at other locations. Following the start of particleboard production in mid-August 2001, Sonae Arauco predecessor company Glunz AG had initially moved two lines to Nettgau form the Triangel particleboard plant in Sassenburg, which was shut down in November 2001. These two lines, with a format of 2,300 x 5,750 mm, had been delivered to Sassenburg by Siempelkamp Maschinen- und Anlagenbau GmbH at the end of the 1980s. In the first half of 2014. Glunz also relocated a Wemhöner short-cycle press from the Solsona particleboard plant of Tableros Tradema S.L. (Tres Cantos, Spain) to Nettgau. This plant, like Glunz, belonged to Sonae Industria SGPS and was shut down at the end of 2012.

Egger secures additional plot of land in Brilon



Egger plant in Brilon

(Photo credit: EUWID)

In mid-2021, Egger Holzwerkstoffe Brilon GmbH & Co. KG acquired 20,000 m² commercial space located in the direct vicinity of its existing particleboard and MDF/HDF plant, and thus secured further space as a reserve for expansion. The current occupant of the premises, Briloner Leuchten GmbH & Co. KG, has plans to move to its Meschede site, where the company has been operating a logistics centre since 2019. Administration and sales, however, are to remain in Brilon for the time being. Parallel to the purchase agreement, Briloner Leuchten has thus agreed with Egger on a multi-year lease. Information concerning the term of the lease agreement has not yet been provided.

Briloner Leuchten's plans to sell its headquarters had already become public at the beginning of 2020; at the time, the company explained the plan with the lack of expansion opportunities. The premises, which include a 2,000 m² office building and a 4,000 m² dispatch building, are located in the immediate vicinity of the Egger office building, which was erected in the early 1990s and expanded at the end of 2012 by the new Forum built in modular construction.

Construction of the Egger plant in Brilon commenced in 1989, it has since been expanded in several stages. The particleboard plant was commissioned in December 1990, followed by the MDF/HDF plant which became operational in February 1996. Commissioning of the sawmill took place in May 2008. In September 2015, Egger commenced production of matt and high-gloss boards in Brilon, which are sold under the name PerfectSense. In this connection, production of laminate flooring was transferred to Gagarin (Russia). Subsequently, production of PP edgings was started up in the first half of 2016 and has since been expanded in several steps. The latest major investments in Brilon concerned the replacement of two short-cycle presses, construction of a high-bay warehouse, installation of a second PerfectSense lacquering line as well as the installation MDF/HDF exhaust air scrubbers. For further expansion of production, Egger has access to an area of 140,000 m² adjacent to the sawmill on the factory premises, which cover a total area of around 570,000 m².

Egger Group's investments increase by one-fourth

After returning to a normal level in the 2020/2021 financial year, the Egger Group ramped up its investment activity again in the first half of 2021/2022 (30 April). At €141.1m (May-Oct. 2020: 112.4m), investments in fixed assets, intangible assets and acquisitions exceeded the preceding year's figure by 25.5%. On the other hand, this corresponds to a decrease of more than 50% vis à vis the first half of the 2019/2020 financial year (€297.4m).

After the new investments in Biskupiec (Poland) and Lexington (North Carolina)

were largely completed, the focus was shifted to expansion investments at several locations, including St. Johann, Brilon and Gifhorn. Furthermore, internal material flows and storage were optimised at several plants and capacities for processing waste wood were expanded.

Concerning distribution of the total investment sum, €53.2m (32.8m) went into maintenance investments and €87.8m (79.6m) went into growth investments. At €123.0m (101.6m), 87.1% of the new investments were made in the decorative products business division. The flooring products division accounted for investments of €12.4m (8.5m) and the building products division for €5.7m (2.3m). \square

Egger Group to install third press in Lexington

Egger Group has revealed the next project at its particleboard mill in Lexington in the US state of North Carolina, which started operating in September 2020. According to a press release distributed in the US on 2 December, Egger Wood Products LLC intends to invest around US\$50m in a third short-cycle press and in building a recycling line. The short-cycle press, for which the firm has earmarked around US\$20m, is expected to start up by the end of 2022. The recycling line, which is primarily designed to process packaging wood, is scheduled for commissioning in early 2023 and involves an estimated investment of US\$30m, Both projects are still part of the first phase in Lexington, which includes the installation of the raw particleboard line with an annual capacity of around 650,000 m³ and up to four short-cycle presses. The second phase will see the company enter the treating business. The necessary space was taken into account when building the complex.

Egger has already ordered the new shortcycle press. As with the two existing presses, Wemhöner Surface Technologies GmbH & Co. KG will reportedly deliver the technology. The first press, which was designed to handle American formats, came online at the beginning of September 2020. The second short-cycle press can laminate board in sizes of 5,600 x 2,070 mm. Both units have been running at full capacity since the end of the first guarter of 2021. The third short-cycle press, which also has a large format, can press synchronous pores on both sides. This step means that the US site will be able to start making Feelwood product line, which has so far been shipped from Europe to North America, from the beginning of 2023, boosting the plant's total laminating capacity by around 50%.



Lexington particleboard mill

(Photo credit: Egger)

Arauco México to invest US\$200m in new MDF plant

Celulosa Arauco y Constitución S.A. (Santiago de Chile) plans to double the MDF/HDF capacities of Arauco Industria de México S.A. de C.V. (Durango) by installing a production line at the Mexican site in Zitácuaro (Michoacán). The company plans to invest around US\$200m on the project, which was announced at the end of October 2021. Production is expected to commence during 2024, depending on the progress of the approval procedures still required.

To date. Arauco México has produced raw and laminated particleboard at the Zitácuaro site. The plant has belonged to Arauco since the company took over the majority of the activities of Maderas y Sintéticos de México S.A. de C.V. (Durango); this was concluded at the end of January 2019. The transaction, which had already been agreed in principle in mid-December 2017 and was subsequently adjusted several times, had additionally included the particleboard and MDF/HDF facilities in Durango. Following the takeover, the production capacity of the two sites was indicated at 339,000 m³ particleboard and 220,000 m³ MDF/HDF. The MDF/HDF line in Durango, supplied by Dieffenbacher GmbH Maschinen- und Anlagenbau, has been operational since the first quarter of 2016.

Greenplac: vertical integration continues

Brazilian conglomerate Asperbras Brazil S.A. (São Paulo) has also entered into the impregnation sector via its MDF/HDF plant operating under the name Greenplac at the location in Água Clara, Mato Grosso do Sul. The construction of the treater in July 2021 represents a continuation of the company's vertical integration of the plant, which has already been ongoing for a considerable period. As recently as May, the company brought a formaldehyde plant into operation; this commissioning was primarily intended to cover the requirements of the adhesive resin plant, which has been in production since the beginning of 2020.

Greenplac first began producing MDF/HDF with the January 2018 commissioning of the plant. Siempelkamp Maschinen- und Anlagenbau GmbH had supplied a complete line, designed for an annual capacity of 250,000 m³ on a ContiRoll in 9 ft x 27.1 m format. According to Greenplac, the facility can now produce approximately 300,000 m³ annually. A new short-cycle press was also installed during 2021, which has increased annual laminating capacities by more than 70,000 m³.

In the course of the production expansions, Greenplac has also expanded its shipping and storage areas by 8,500 m². This is intended to improve truck arrival and departure processes, thereby accelerating MDF/HDF delivery processing times. \square

PG Bison orders MDF plant for eMkhondo

On 22 November 2021, South African wood-based materials manufacturer PG Bison Ltd. (Johannesburg) signed the order contract for the supply of the main components of the MDF/HDF plant planned for its eMkhondo (Piet Retief) location at Siempelkamp Maschinen- und Anlagenbau GmbH. The order includes a drum chipper, refiner, dryer and an energy plant as well as the forming and press line with a 6 ft x 38.7 m ContiRoll. According to PG Bison, the new plant will produce MDF,

light MDF and HDF in thicknesses between 3-35 mm, reaching a capacity of around 780 m³/day. After commissioning, which is planned for mid-2024, the total capacity for MDF/HDF sold by PG Bison under the name SupaWood will increase from currently 420 m³ to 1,200 m³. Adding a MDF/HDF line to the eMkhondo particleboard plant is part of a larger investment programme approved in mid-November 2020, which also includes installation of a chip dryer and an energy plant in eMkhondo as well as construction of a further short-cycle press and a HotCoating plant at the MDF site in Boksburg.

CalPlant to reorganise according to chapter 11

Straw-based fibreboard manufacturer Cal-Plant I LLC and parent company CalPlant I Holdco LLC, both based in Willows, California, filed a petition for reorganisation under chapter 11 of the US bankruptcy code in the US bankruptcy court of the district of Delaware on 5 October 2021. CalPlant started up the new MDF/HDF plant in Willows in November 2020, approximately two years later than originally planned. Due to the plant modifications required at the time, it was subsequently not possible to transfer production to regular operations. As yet, therefore, the company has only been producing on a restricted scale.

CalPlant has undertaken various steps in this connection, including applying at the end of July to California Pollution Control Finance Agency (CPCFA) for a fourth corporate bond to the amount of US\$18m to finance the adjustments required for regular operation, of which approximately US\$13m was intended to be used for the purchase and installation of new equipment. According to an announcement published by the CPCFA in this context, CalPlant had already issued three tax-advantaged bonds to a total value of US\$343.8m to finance the greenfield project. The third bond had to be used for closing financial gaps caused by delays in installation and commissioning, necessary technological adjustments and the budget overruns which ensued. These problems had led to delays in payment and deferment agreements for the two previous bonds.

The plant, designed for an annual capacity of 250,000 m³, had been supplied by the Siempelkamp Group. As well as being the main equipment supplier for the project, according to the statement issued by CPCFA, Siempelkamp Maschinen- und Anlagenbau GmbH is also a minority shareholder in CalPlant I Holdco with a share of 2.58%. The remaining shares are held by ZC CalAg LLC (30.66%), Occator Agricultural Properties LLC (29.94%), CalAg LLC (19.85%), Columbia Forest Products Inc. (14.64%) and CalAg Preferred Investor LLC (1.65%). □

Kim Tin Group orders two MDF/HDF lines

The Vietnamese company Kim Tin Group, based in Ho Chi Minh City, intends to invest around US\$350m in boosting its MDF/HDF capacity over the coming three years. At the start of December 2021, the firm ordered two production lines with a combined annual capacity of 860,000 m³ from Dieffenbacher GmbH Maschinen- und Anlagenbau. These two orders were added to Dieffenbacher's list of orders in the first quarter of 2022 following receipt of the down payment. The first line is to be installed in Chon Thanh, Binh Phuóc Province, starting in November 2022, with commissioning scheduled for May 2023. The second line in Dau Giay, Dong Nai Province, is to get up and running in February 2024. According to Dieffenbacher, Kim Tin Group is already exploring making additional investments in MDF/HDF manufacturing in central and northern Vietnam by 2025.

The two lines are essentially identical in design. The orders placed with Dieffenbacher are thus broadly similar in size. B. Maier Zerkleinerungstechnik GmbH will deliver the chipper for both orders. A ClassiScreen wood chip screen from Dieffenbacher Panelboard Oy will also be used. Other parts of the order include the fibre dryer, Z sifter, ProJET gluing system, forming and press line with an

8 ft x 48 m CPS+ press and a daily capacity of 1,300 m³, press exhaust air treatment systems, raw board transportation and storage and automation including its Evoris package.

Kim Tin Group started making MDF in 2011 using a mill built by Kim Tin MDF JSC in Tân Phú, Binh Phuóc. Previous reports suggest that this mill has an annual capacity of around 160,000 m³. The group installed a larger line at its site in Tân Lâp, Binh Phuóc, starting in August 2016. Set up to make board 2.5-40 mm thick and with a designed annual capacity of around 400,000 m³, this line has been operating since June 2018. The main technology provider for this project was Siempelkamp Maschinen- und Anlagenbau GmbH. Awarded in July 2016, the contract included a fibre dryer, the forming and press line with an 8 ft x 47 m ContiRoll, cooling and stacking technology and an automated storage system. MDF/HDF made by Kim Tin is sold in South-East Asia and export markets under the Timbee MDF name. The Chinese flooring manufacturer Creative Flooring Solutions Holdings Ltd. (CFL), headquartered in Shanghai, commissioned a laminate flooring plant in direct proximity to the FSC mill during the first half of 2019.

Wanhua orders two more lines from Dieffenbacher

The Chinese wood-based panel producer Wanhua Ecoboard Co. Ltd. ordered two more continuous woodbased panel lines from Dieffenbacher GmbH Maschinen- und Anlagenbau during 2021. Both lines are designed to make Super Particleboard (Super PB), which combines standard chips with thin chips. The first line is slated to be installed in Chenzhou, Hunan Province starting in September 2022. The assembly of the second line in Leshan, Sichuan Province, will get going one month later. Both lines are slated for commissioning in the second quarter of 2023.

Dieffenbacher has supplied a total of eight continuous lines to Wanhua Ecoboard to date. Six lines make straw particleboard. The first particleboard line came online in October 2017, with the sixth line starting up at the end of 2019. Dieffenbacher began work to assemble the seventh and eighth lines in the second quarter of 2021.

Work on a project to install a line for fine OSB is in progress in Lankao in Henan Province. Another line in Yiyang, Jiang-xi Province, will produce MDF. Each line uses PMDI adhesive as the binder, supplied by Wanhua Industrial Group Co. Ltd, based in Yantai, Shandong Province, which has a stake in Wanhua Ecoboard.

Centuryply: Construction of second MDF plant starts

By laying the foundation stone on 23 December 2021, the wood-based panel and laminates manufacturer Century Plyboards (Centuryply) of Kolkata in West Bengal, India, began construction work on the new MDF site planned in Gopavaram, Andhra Pradesh, in southern India. In contrast to the original plans, the greenfield project also includes creating capacity for producing laminates, plywood, and particleboard.

Centuryply had originally planned a pure MDF plant with a capacity of 700 m³ per day or 231,000 m³ per year, which was to be put into operation by the first quarter of the business year 2023/2024. The company is meanwhile assuming production will commence in the second half of the business year. The plant now geared to a daily capacity of 950 m³ is being supplied by the Siempelkamp Group.

Greenpanel getting two mat prebeating systems

The Indian wood-based panel manufacturer Greenpanel Industries Ltd. of Tinsukia, Assam, has increased the capacity of its MDF works in Routhu Suramala, Andhra Pradesh, and Pantnagar, Uttarakhand, by roughly 20% in each case by means of debottlenecking measures. A mat preheating system has been installed at each facility.

In Pantnagar, the installation took place during downtime of almost two weeks starting on 11 November 2021. According to information from Greenpanel, the facility resumed operation on 24 November with its former annual capacity increased from 180,000 m³ to 216,000 m³. Directly after operation of the production line in Pantnagar was resumed, the refiner there was damaged, which led to downtime of another three weeks. The assembly work in Routhu Suramala began on 17 January. Greenpanel had originally planned a timeframe of eight days for this but, for technical reasons, the plant did not restart until 29 January. Here, annual capacity has been increased from the former 360,000 m³ to 444,000 m³.

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green tech

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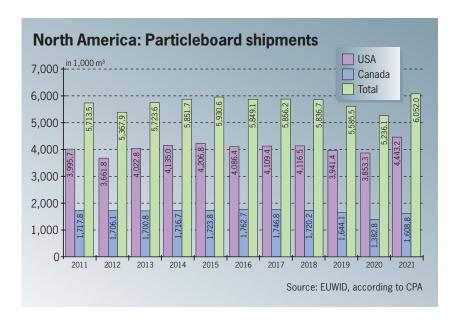
Commissioning of new mills lead to increase in the south and south-east region of the US

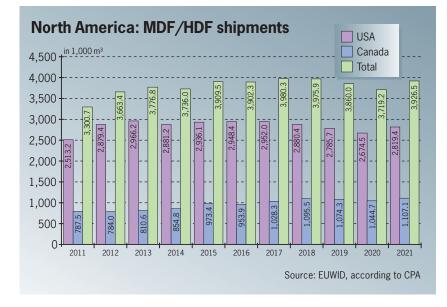
North American composite panel markets continue to see shifts

The ramp-up of new mills in the east and south-east of the US and the closure of older lines, which is now mainly taking place on the west coast, prompted further shifts on North American particleboard markets last year.

Sales volumes in the south and south-east of the US have risen after Kronospan LLC.

based in Eastaboga, Alabama, and Egger Wood Products LLC, headquartered in Lexington, North Carolina, commissioned new mills in October 2019 and September 2020, respectively. By contrast, the shutdown of a particleboard mill in Dillard, Oregon by Roseburg Forest Products Inc, based in Roseburg, Oregon, at the end of October 2021 has trimmed output in the western US.





Particleboard sales in the south and southeast of the US climbed by 23% to 2.994m (2020: 2.425m) m³ in 2021 in the wake of these capacity changes, according to the Composite Panel Association (CPA), headquartered in Leesburg, Virginia. A rather subdued start in the first quarter (+3% to 646,800 m³) gave way to large double-digit growth in sales in each of the following three quarters (O2: +40% to 757,700 m³, Q3: +20% to 777,900 m³, Q4: +23% to 755,100 m³). Lower sales in the western US in the first guarter (-6% to 365,500 m³) and fourth quarters (-12 % to 325,000 m³) were offset by increases in the second (+28% to 399,000 m³) and third quarters (+7% to 379,800m3), respectively. Looking at the year as a whole, sales volumes on the west coast edged 1% higher to 1.449m (1.428m) m³. Canadian particleboard sales were broadly consistent across the first three quarters (Q1: +14% to 413,100 m³, Q2: +52% to 411,200 m³, Q3: +14% to 408,200 m³). A year-on-year slump of 4% to 376,300 m³ was only recorded in the fourth quarter. Looking at all 12 months, though, sales were up 16% at 1.609m (1.383m) m3. Across all three regions, North American particleboard sales leapt by 16% to 6.052m (5.236m) m³ in 2021.

US and Canadian sales of MDF/HDF tracked largely in parallel last year. In preliminary sales statistics, the CPA put the upturn in US sales at 5% to 2.819m (2.675m) m³. The first three quarters were stronger than the same periods in 2020 (Q1: +2% to 698,400 m³, Q2: +20% to 723,200 m³, Q3: +5 % to 724,300 m³); however, MDF/HDF sales softened in the fourth quarter (Q4: -3% to 673,500 m³). Canada saw a strong first half of the year give way to a slower second half $(Q1: +1\% \text{ to } 276,300 \text{ m}^3, Q2: +34\% \text{ to})$ 292,100 m³, Q3: -3% to 271,700 m³, Q4: -2% to 267,100 m³). Looking at 2021 as a whole, sales rose by 6% to 1.107m (1.045m) m³.

Export business has delivered stronger growth than the domestic market

Brazil: Total sales of particleboard and MDF/HDF increased by 13% in 2021

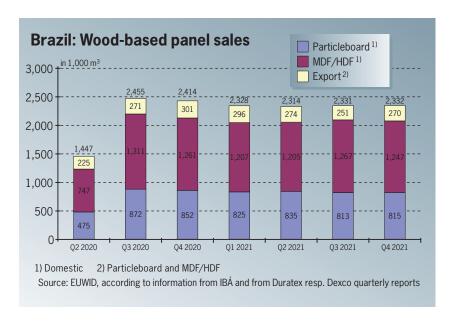
The Brazilian wood-based panel industry sold 9.305m (2020: 8.223m) m³ of wood-based panels in 2021, 1.082m m³ or 13.2% more than in 2020.

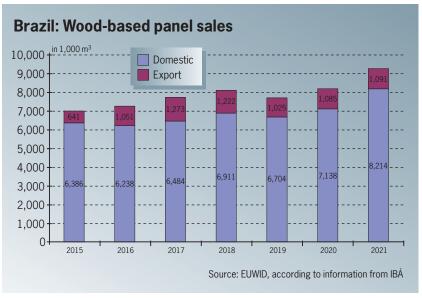
The Brazilian domestic market performed much better than the export business, with an increase of 1.076m m³ or 15.1% to 8.214m (2020: 7.138m) m³. Exports were only slightly higher than in 2020 at 1.091m (1.085m) m3. The association Indústria brasileira de árvores (IBÁ), based in Brasilia and São Paulo, further broke down domestic sales into MDF/ HDF and medium-density particleboard (MDP). These two product groups showed similar growth rates. Brazilian MDF/HDF sales were up 670,000 m³ or 15.7% at 4.927m (4.257m) m³, while MDP sales increased by 406.000 m³ or 14.1% to 3.287m (2.881m) m³.

An overview of the IBÁ figures contained in the latest annual report to be released by Dexco S.A., headquartered in São Paulo, shows similar sales volumes in each of the four quarters. However, the rates of change compared to 2020 trended in opposite directions in the two halves of the year due to different baselines.

Total sales volume rose by 22.2% to 2.328m^3 in the first quarter. This growth was driven primarily by the domestic market, where an increase of 25.5% to 2.032m^3 was achieved. Despite the devaluation of the Brazilian real, export sales increased by 3.7% to $296,000 \text{m}^3$. An even bigger 59.9% growth to 2.314m^3 occurred in the second quarter due to a Covid-related downswing in sales in the same stretch in 2020. Domestic sales rose by 66.8% to 2.040m^3 , exports increased by 20.9% to $274,000 \text{m}^3$.

The third quarter brought the first year-onyear decline of 5.3% to 2.331m m³. On the domestic market, sales decreased by





4.7% to 2.080m m³. Foreign sales fell by 7.6% to 251,000 m³. Fourth-quarter sales volumes (2.332m m³) were practically at the same level but 3.4% lower than the prior-year period. Brazilian domestic sales volumes fell 2.4% to 2.062m m³. Exports were down 10.3% at 270,000 m³.

The export business, which used to be of little relevance, has delivered stronger

growth than the domestic market over the past decade. After enjoying sizeable improvements up until 2017, exports have since declined. Domestic deliveries showed downturns of varying degrees in 2014, 2015, 2016 and 2017, but increased in all other years. Brazilian domestic shipments thus rose by 16.2% over the ten-year period, while exports more than quadrupled during the same decade.

SVP is supposed to have initiated a bidding process for Pfleiderer's German sites

Kronospan notifies plans to acquire two wood-based panel mills of Pfleiderer

Kronospan Holdings plc, based in Nicosia, Cyprus, notified the EU Directorate-General for Competition of its plans for the complete takeover of Pfleiderer Polska Sp.zo.o., headquartered in Grajewo, Poland, for approval on 15 February 2022.

The planned transaction includes a particleboard mill in Wieruszów as well as a particleboard mill and thin MDF/HDF mill in Grajewo. The adhesive and impregnating resin manufacturer Silekol Sp.zo.o, which is based in Kedzierzyn-Kózle, is excluded from the transaction. Shortly after the notification, the European Commission started surveying other particleboard producers and converters to seek information about details. A deadline of 23 February has been set for responses. A decision on whether to clear the transaction under competition law is to be made by 22 March.

With this schedule, Kronospan's plans to acquire Pfleiderer's Polish plants are dragging on longer than expected. Unconfirmed reports suggest that Kronospan was given the nod in spring 2021 after a divestment process that began back at the end of 2019 and was resumed in the fourth quarter of 2020 after an interruption lasting several months. Kronospan had then prepared the notification documents for clearance under anti-trust law. However, the proposed merger had not been officially notified in the second half of 2021, according to the EU Directorate-General for Competition. The authority did not want to comment on the reasons. Apart from the effects of the pandemic, personnel changes among the EU staff entrusted with handling the case also seem to have played a role. Kronospan provided the Commission with additional documents for approval under competition law on multiple occasions during the second half of 2021.

Owing to the size of the companies involved, the transaction must be subjected to scrutiny at the EU level. Wood-based panel and furniture-industry insiders believe approval from the cartel authorities will not be easy to obtain. A few big raw

particleboard processors, in particular, are critical of the planned transaction. Some insiders suspect that the deal will only be approved subject to conditions. The most likely scenario will see particleboard production end in Grajewo, which would then concentrate on manufacturing thin MDF/HDF and refined products.

Kronospan is already represented in Poland with two particleboard and MDF/HDF mills in Szczecinek and Mielec. An acquisition of the particleboard plant in Wieruszów and the site in Grajewo geared to particleboard and thin MDF/HDF would give Kronospan high market shares in both product areas at least in Poland. Besides Kronospan and Pfleiderer, there are three other particleboard manufacturers in Poland (Swiss Krono Group, Egger Biskupiec Sp.zo.o. and Tanne Sp.zo.o.) and three MDF/HDF producers (Swiss Krono Group, Homanit Polska Sp.zo.o. and Homanit Krosno Odranskie Sp.zo.o., Ikea Industry Poland Sp.zo.o.). There is relatively heavy concentration as regards buyers, too, at least in the furniture industry. The largest recipients include Ikea Industry, Fabryki Mebli Forte S.A., and Black Red White S.A. (BRW).

The private equity company Strategic Value Partners LLC (SVP), which is headquartered in Wilmington, Delaware, and holds a stake in Pfleiderer, has now likely also initiated a bidding process for Pfleiderer's German sites in Neumarkt, Leutkirch, Gütersloh, Arnsberg and Baruth as well as the Polish adhesive and impregnating resin manufacturer Silekol. A teaser with general information is said to have been sent to interested parties in January; a more detailed information memorandum followed in the next stage. SVP's European branch, which operates as Strategic Value Partners UK LLP, did not wish to comment on the status of the anti-trust approval for the sale of the two Polish plants or on the divestment process for the German locations when asked by EUWID.



Particleboard mill in Grajewo

(Photo credit: Pfleiderer)

MDF/HDF manufacturing now up and running at the new site in Lyudinovo

Kronospan Group adding three more wood-based panel sites in Russia

Kronospan has doubled its number of wood-based panel sites in Russia to six by commissioning an MDF/HDF line built in Lyudinovo, Kaluga oblast, buying an older particleboard mill in Chaadaevka, Pensa oblast, and moving forward with longstanding negotiations about acquiring assets in Igorevskaya, Smolensk oblast.

Until last year, Kronospan has had three mills in Russia. 000 Kronospan makes products including MDF/HDF, particleboard, OSB and a variety of upstream and semi-finished and finished products at the Egorievsk mill, which was commissioned in several stages starting in 2003. 000 Kronospan Elektrogorsk in Elektrogorsk, Moscow oblast, was created in April 2013 when the group acquired the wood-based panel and furniture producer AO Elektrogorskmebel. This site currently makes particleboard and will add a thin MDF/ HDF line over the next two years. In 2013, Kronospan had also started building a mill that now does business as 000 Kronospan Bashkortostan in Ufa in the Republic of Bashkortostan. Machinery from a particleboard mill that Sonae UK Ltd., based in Knowsley, had closed down in September 2012, was first installed there. Production commenced in the second half of 2015. An OSB line was commissioned in June 2018. with Kronospan combining a second-hand forming and press line bought from 000 Oris in the second guarter of 2016 with a variety of pieces of new machinery.

Kronospan had acquired the new location in the Lyudinovo special economic zone during the first half of 2016. The company intends to construct a production facility integrated across several phases for upstream products, wood-based panels and semi-finished and finished products in Lyudinovo over the next few years. The first step involved building an MDF/HDF line that has made its first piece of board last year. Two short-cycle presses were first installed



Kronospan started MDF/HDF production in Kaluga last year.

(Photo credit: Kronospan)

to laminate MDF/HDF. A particleboard line with laminating capacity is to follow at a later date. Kronospan also intends to invest in a decor paper mill with two paper machines in Lyudinovo via Ultra Dekor RUS 000, a new company founded in November 2019. Under the original plans, the first paper machine, which will have a designed capacity of around 40,000 t/year, should start operating as soon as the beginning of 2022. This timetable has now been pushed back due to delays. Some of the decor paper made by Ultra Dekor should be processed on-site. Unconfirmed reports suggest that Kronospan wants to install three rotogravure machines and up to eight treating lines in several phases.

The particleboard mill that Kronospan has acquired in Chaadaevka is equipped with two single-opening lines, although just one of them is up and running. This technology is to be replaced by a new production line in the medium term. Preliminary planning work is currently underway. At the same time, site and environmental issues still have to be resolved.

With regards to the plant of Sergiev Posadbased Russkiy Laminat Wood Chipboard Industry Ltd. in Igorevskaya, Kronospan had taken over outstanding liabilities to Sberbank during the past year, thereby gaining indirect access to the assets of the company, which has been in financial trouble for several years. Russkiy Laminat's particleboard mill in Igorevskaya was leased to Kronospan after the firm filed for bankruptcy. With a continuous press commissioned in early 2013, this mill has an annual capacity of around 340,000 m³. Russkiy Laminat had started installing an MDF/HDF line at the same site but had not completed this work because of financing troubles. Unconfirmed reports suggest that Russkiy Laminat's administrator plans to auction off the machinery in Igorevskaya. Kronospan is considered the strongest candidate to buy the assets. Russkiy Laminat's particleboard mill at its Sergiev Posad headquarters is currently used by the Russian laminate producer OAO Slotex, based in St. Petersburg, under the terms of a lease agreement that run until the end of January 2022.

Up to now, Egger runs 15 ContiRoll presses, two CPS and one Küsterspress

Egger to replace particle board mill at Russian Shuya site with new building

The Egger Group, headquartered in St. Johann, Austria, intends to invest around €300m in replacing its particleboard mill in Shuya, in Russia's Ivanovo oblast, over the next two years.

This mill has been up and running since the middle of 2005. On 10 November 2021, Egger's group management team signed an investment agreement to this effect at a meeting with the Ivanovo oblast Government led by Governor Stanislav Voskresensky. The necessary approval procedures were then initiated. Project planning for the new mill is at a relatively advanced stage. Production windows have already been scheduled with suppliers for the planned machinery and equipment.

However, the final orders can only be placed once all permits have been issued. Therefore, Egger did not yet want to comment on plant details, capacity and the exact schedule. Commissioning is to take place by the beginning of 2024. This

would mean that preparatory construction work would have to start this year; the technology should then be assembled starting at the beginning of 2023.

Egger built the particleboard mill in 2004 and 2005 at the Shuya site, which is about 300 km north-east of Moscow. The company had acquired a plot of about 110 hectares in the south-east of the city at the end of 2003. The plans at that time had initially envisaged several phases and a total investment of about €300m. However, 000 Egger Drevprodukt Shuya, which was founded for Egger's expansion into Russia, only carried out the first stage of the planned particleboard mill. According to information at the time, Egger invested about €60m in installing two second-hand single-daylight lines, a new short-cycle press and in building a logistics centre. Egger installed a second short-cycle press and a second-hand calendering line for thin particleboard production in subsequent years. However, MDF, OSB and laminate flooring capacity did not come to fruition as originally envisaged.

Egger had acquired the single-daylight lines to make raw particleboard, designed to have an annual capacity of around 250,000 m³, in April 2003 from the British company Masistar Ltd, based in Shildon, Durham. Masistar had filed for bankruptcy in February 2003. Egger acquired particle preparation and drying technology from the particleboard manufacturer Verpan S.p.A., based in Nichelino, Italy, which stopped production at the beginning of 2001. The calendering line had been produced at the insolvent firm Wilhelm Mende GmbH & Co KG, based in Gittelde, Germany, until the end of 2010 and was then sold to Egger at the beginning of 2011 via Modul Systeme AG. Siempelkamp Maschinen- und Anlagenbau GmbH had supplied the two short-cycle presses that went into operation in 2005 and 2008, respectively. These two presses are to be retained at the new mill. Otherwise, current plans indicate that the project will solely use new technology.

The Egger Group now runs a total of 15 ContiRoll presses delivered by Siempel-



The Egger mill in Wörgl is equipped with calander lines.

(Photo credit: Egger)

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based in Riehen, Switzerland. A ContiRoll press was installed and commissioned there in 1994 (7 ft x 38 m, extended to 43 m in 1998). Production problems that occurred for a time after the acquisition were resolved by performing a fundamental reconstruction project in 2006. In the same year, two single-opening presses at its plant in Hexham in the UK were replaced by a continuous production line (8.5 ft x 48.7 m).

A particleboard line (8.5 ft x 48.7 m) was first installed at the new site in Radauti, Romania, in 2007. In 2011, an OSB line with a largely identical press was added to the mill (9 ft x 48.7 m). Acquired in 1994, Egger's site in Rion de Landes, France, replaced a ContiRoll (7 ft x 27 m) commissioned by the previous owner in 1990 with a new press in 2008 (7 ft x 42.1 m). However, Egger did not flesh out plans to use the old press to make a new product after all.

Following the addition of the OSB line in Radauti, Egger had focused its investment activity on boosting refining capacity for several years. The MDF/HDF line commissioned in Gagarin in April 2016 was the next major project (9 ft x 48.7 m). After its July 2017 acquisition of the Concordia particleboard and MDF/HDF mill, Egger moved forward with two projects in Biskupiec and in Lexington. The installation of the ContiRoll in Biskupiec (9 ft x 38.4 m) marked the first time that Egger used a 9 ft-wide press to make particleboard in an effort to achieve greater flexibility in the range of board sizes that it could make. The line in Lexington is even 10 ft wide, at a length of 43.7 m, it is also Egger's third-longest particleboard line after Hexham and Radauti.

Egger now operates four ContiRoll presses that are 48.7 m long. Five presses are between 42.1 m and 43.7 m long. The company also has three 38 m-long and three ca. 33 m-long presses. Six presses are 7 ft wide; all of them make particleboard. Two particleboard presses are 8.5 ft wide. Egger opted for particleboard lines 9 ft and 10 ft wide for its last two projects. The three MDF/HDF presses are 8.5 ft or 9 ft wide. The two OSB lines have widths of 9 ft.

kamp Maschinen- und Anlagenbau GmbH, after commissioning a particleboard line in Lexington, North Carolina, on 19 September 2020. Its mills in St. Johann, Unterradlberg, Rambersvillers, Rion des Landes (both in France), Hexham, Barony (both in the UK) and Biskupiec (Poland) each use one ContiRoll to make particleboard. Its Gagarin location is also home to an MDF/HDF line with a ContiRoll alongside a particleboard line provided by Dieffenbacher GmbH Maschinen- und Anlagenbau, that Egger acquired when it purchased the mill from its previous owner in July 2011. Egger operates two side-by-side ContiRoll presses in Brilon (particleboard and MDF/HDF), Wismar (OSB and MDF/ HDF) and Radauti, Romania (particleboard and OSB). Egger also uses five calendar lines, three single-opening lines and two more continuous presses from other technology providers to make raw board. The two continuous presses can be found at a mill in Concordia, Argentina that Egger acquired from Masisa in mid-2017; these presses were supplied by Dieffenbacher and Metso Panelboard. The Concordia site also houses a single-opening press and a calendar press that had already shut down before the location changed hands. The other two single-opening presses are located in Shuya. The calendar lines operate in Wörgl (three particleboard calendars), Bevern (MDF) and Shuya.

Egger installed its first ContiRoll at its St. Johann headquarters in 1987. The 7 ft-wide press was initially 23 m long but was extended to 33 m in 1992. The next press was added starting in 1989 in a project to build a new particleboard mill in Brilon (7 ft x 38 m). An MDF line was installed alongside the particleboard line in 1995 and 1996 (8.5 ft x 33 m) and underwent modernisation in 2006. Egger ordered four production lines from Siempelkamp in rapid succession in the second half of the 1990s: a particleboard line for its facility in Barony, Scotland (7 ft x 33.5 m, extendable to 43.5 m), a particleboard line for Unterradlberg, Austria (7 ft x 43.5 m) and an OSB line (9 ft x 38.5 m) and an MDF/HDF line (9 ft x 43.5 m) for a new mill in Wismar. In 2000, Egger also purchased a particleboard mill in Rambersvillers, France, then doing business as Pannovosges S.A. from Hiag AG,

Panels division will operate three MDF mills with four lines in Europe

Unilin ramping up its WBP business by acquiring Panneaux de Corrèze

Unilin bvba, headquartered in Wielsbeke, Belgium, brokered a deal with the owners of Panneaux de Corrèze S.A.S. to buy the MDF mill in Ussel, in central France in the second half of October 2021. The transaction was closed in early November.

By integrating the mill with an annual capacity of around 150,000 m³, Unilin's Panels Division gained a third MDF/HDF production facility in Europe. The company operates two MDF/HDF lines in Bazeilles, northern France with a combined annual capacity of about 700,000 m³. Spanolux's site in Vielsalm, Belgium can produce another 300,000 m³.

The integration of Panneaux de Corrèze allows Unilin to further expand these operations. In addition to its Clairpan softwood panels and Medium products made entirely out of hardwood, the company launched its Next naturalpanel line as recently as early July. This product uses the Green Ultimate bio-based, formaldehyde and PMDI-free adhesive system developed by

the biochemical start-up Evertree S.A.S., headquartered in Paris. Clairpan products are offered in three standard sizes 2,440 x 1,220 mm, 2,800 x 2,070 mm and 3,700 x 2,070 mm and in thicknesses from 5 mm to 30 mm. Hardwood panels are available in sizes of 2,800 x 2,070 mm and 3,700 x 2,070 mm and in thicknesses of 6-50 mm. Its portfolio of Next naturalpanel products currently comprises five thicknesses between 8 mm and 22 mm in a 2,800 x 2,070 mm size. FSC-certified and PEFC-certified products are available on request. Panneau de Corrèze operates a continuous production line commissioned in 1990. Delivered by Küsters Maschinenfabrik GmbH & Co. KG, the 2,600 mm x 19.0 m press was extended to 23.1 m in 1995; a second extension to 29.3 m followed in 1999.

The French business news service Societe.com reported that Panneaux de Corrèze manufactured about 135,000 m³ of MDF, generated revenues of €34.1m (2019: 38.2m) and employed 102 people in the 2020 financial year. Revenues were thus

10.8% lower than in 2019. Net profits tumbled 22.1% to about €1.1m (1.4m). Its management team is made up of Jérôme Cabaret, Pascal Casanova and Philippe Mocaer. They purchased the assets of Isoroy S.A.S., based in Antony, France, from Sonae Industria SGPS S.A., headquartered in Maia, Portugal, in a management buyout in April 2015. External investors were also involved in this takeover, including the regional investment fund FCI Limousin S.A.S., headquartered in Limoges.

Unilin further expanded its wood-based panel operations by acquiring Panneaux de Corrèze. In the past few months, the company had already announced major investments in its Flooring and Insulation divisions. Within the Flooring division, a new profiling line is currently being installed at the Vielsalm laminate flooring mill. The laminate flooring and design flooring mill in Wielsbeke is also slated for modernisation and a significant expansion by 2024. Plans provide for installing another short-cycle press and a profiling line, building two high-bay warehouses and making a variety of investments in the site's infrastructure.

The firm's insulating materials activities were expanded in mid-September with the purchase of the Irish manufacturer Ballytherm Trading Ltd., based in Ballyconnell, Cavan. The Panels division commissioned a new short-cycle press at the Spano particleboard mill in Oostrozebeke over the summer. The company started making CPL in Oostrozebeke, as well. Unilin will move a dividing saw for melamine-faced particleboard and edgebanding gluing machinery from Wielsbeke to Oostrozebeke during 2022. The Panels division also includes the Bospan particleboard mill in Wielsbeke, a coating plant in Izegem (Belgium), an adhesive resin plant in Gent (Belgium) and three downstream processing sites in Amsterdam, Merchtem (Belgium) and Bischweier (Germany).



Unilin's MDF/HDF plant in Bazeilles

(Photo credit: Unilin)

Project will include fibre dryer, forming and press line, sanding and cut-to-size line

Homanit planning to replace MDF/HDF line in Losheim over the next two years

Homann Holzwerkstoffe GmbH unveiled plans to invest €65m in its thin MDF/HDF mill in the western German town of Losheim on 6 December.

Large parts of a continuous production line that Homanit GmbH & Co. KG has operated there since 1994 will be replaced by new technology over the next two years. The entire project will include the installation of a new fibre dryer, an 8 ft wide forming and press line, and a new sanding line and cut-to-size line in the finishing department. The new line in Losheim will have the same width as two production lines at Homanit's Polish mills in Karlino and Krosno Odrzanskie and a mill planned for a new location in Pagirai, Lithuania.

The wood yard in Losheim was modernised and expanded during the first half of 2021. This preparatory work saw Holtec GmbH & Co. KG replace the old drum debarker with a Variobarker rotary debarker. At the same time, the company installed new conveyor systems for long and short logs and a bark disposal system.

Homanit also intends to invest in a new energy plant in Losheim as part of the overall project. A railway siding that has not been used in recent years will be reactivated, too. The current schedule for investments in manufacturing activities, which have yet to be fleshed out, indicates that the mill will be commissioned in the fourth quarter of 2023.

Siempelkamp Maschinen- und Anlagenbau GmbH had installed the current MDF/HDF line in Losheim in the mid-1990s. Towards the end of the same decade, Siempelkamp extended the 7 ft x 23 m continuous press to 28 m. The line's portfolio of products includes thin board between 1.8 and 8.0 mm thick, which is primarily supplied to the Central European door industry. This sales focus means that



Homanit is planning to replace older machinery in Losheim.

(Photo credit: Homanit)

panels are an average of 3.0 mm thick. In its current configuration, the Losheim mill has an annual capacity of around 175,000 m³, according to Homanit.

Dieffenbacher GmbH Maschinen- und Anlagenbau had delivered the thin board line for Homanit's mill in Karlino, which was commissioned in May 2008. The main technology supplier for Homanit's plant in Krosno Odrzanskie, that was commissioned in March 2015 was Siempelkamp again. Karlino produces around 250,000 m³ per year, with Krosno Odrzanskie adding around 240,000 m³.

In late December 2020, UAB Homanit Lietuva awarded Dieffenbacher with an order to supply a complete THDF line for the thin board mill in Pagirai. This order includes all key components from the wood yard to final assembly. Dieffenbacher will provide a fibre dryer, a 50 MW energy plant, a PROjet gluing system and a forming and press line with a CPS+ press. Designed to make board 1.5-22 mm thick, the line will have a capacity

of around 950 m³ per day or 310,000 m³ per year.

UAB Homanit Lietuva kicked off construction work in October after receiving the necessary permits. The first piece of board is slated for production in autumn 2022. In addition to the new mill in Lithuania and replacement work in Losheim, Homanit also recently announced a project to add a second energy plant in the coming year at the Krosno Odrzanskie complex.

According to Homann Holzwerkstoffe GmbH, neither the two plants in Poland nor the investment in Lithuania are currently significantly affected by the situation in Ukraine. Given that the company does not source wood from Russia, Belarus or Ukraine no negative effects are foreseeable in this respect either. The investment in Lithuania will continue to be implemented as planned, as key suppliers and service providers for the construction of the plant have been commissioned locally or from the western part of Europe.

MM Kotkamills plans 15% capacity increase for PM 1

Just a few weeks after the takeover by Mayr-Melnhof Karton AG (Vienna) and the resulting name extension, MM Kotkamills (Kotka, Finland) has commissioned Bellmer GmbH (Niefern-Öschelbronn) to convert the PM 1 system used for saturated base kraft production. The conversion includes installation of new pulpers and a new press section with a TurboPress shoe press as well as modernisation of the pre-press section. Overall, the project will increase the production capacity of PM 1, which so far has been indicated at around 170,000 t/year of saturated base kraft, by approximately 15,000 t. or almost 10%. In addition, the energy requirement per tonne of paper produced is to be reduced significantly.

Bellmer has already worked for Kotkamills in the past, carrying out the conversion of the former magazine paper machine to cardboard production. BM 2, which resumed operations in the third quarter of 2016, is designed for an annual capacity of around 400,000 t, but only produced around 260,000 t last year.

Kingdecor has increased its capacity to 350,000 t

The Chinese decor paper joint venture Kingdecor Co. Ltd. commissioned its sixth paper machine in Quzhou, Zhejiang Province, at the end of 2021. The first pieces of decor paper were produced just one day after start-up. The new machine, known as PM 5, has a working width of 3,900 mm, just like PM 3 and PM 4, which were commissioned in February 2015 and October 2018, respectively. The Kingdecor mill's first two paper machines (PM 1 and PM 2) and PM 13, which is still running at a mill operated by its joint venture partner Zhejiang Xian He Special Paper Co, are 2,800 mm wide. Now that the new machine is up and running, Kingdecor's total decor paper capacity has risen to around 350,000 t/ year. Retis Holding GmbH, which is the parent company of Schattdecor AG, and the Chinese partner each hold 50% of the shares in Kingdecor.

Surteco beat forecasts in the 2021 financial year

Surteco Group SE, headquartered in Buttenwiesen, Germany, posted growth in its consolidated revenues to around €756m last year, according to preliminary figures unveiled on 1 February 2022. EBIT is expected to have topped the €70m mark. Both key figures thus exceeded the most recent forecasts. The company had upgraded its revenue forecast from €650m-675m to €725m-750m when publishing its interim report for the third quarter. The EBIT forecast had been hoisted from €47m-52m to €63m-68m.

Surteco's consolidated revenues fell by 7% to €627.0m in the 2020 financial year (2019: €675.3m). By contrast, EBIT more than doubled to €46.1m (2019: €21.1m). In the first three quarters of 2021, Surteco Group raised its revenues by 23% to €566.1m (Jan.-Sept. 2020: 459.3m). EBIT more than doubled to €59.1m (28.8m). Surteco's final consolidated financial statements for 2021 are to be published on 14 April.

Schattdecor and Schmid to partner on distribution

Schattdecor AG, headquartered in Thansau, Germany, and the treater operator Hans Schmid GmbH & Co. KG, based in Gronau, Germany, forged a sales partnership for Schmid's MFS-Touch and MFS-Tech product lines at the end of January 2022. Both of these lines are surface finishes that use a special lacquer application. Schmid's MFS-Touch line uses a special lacquer developed in-house to make super-matte surfaces with anti-fingerprint properties, which are especially sought-after by the kitchen furniture industry. The MFS-Tech product line can be used in various outdoor applications thanks to its UV-protective coating. The two product lines will be marketed through Schattdecor's sales network in North and South America, Asia-Pacific and Russia under the terms of the partnership. Existing customers will continue to be supplied by Schmid.

Schattdecor plans digital printing output of 25m m²



Palis printer in Thansai

(Photo credit: EUWID)

Schattdecor AG used the Palis 2250 digital printing machine commissioned at its Thansau headquarters in the first quarter of 2017 to make around 10.6m m² in the first nine months of the year. June was the single-best month with an output of around 2m m². On average, the 2,250 mm-wide single-pass printing machine ran at 159 m/min, almost reaching the original maximum production speed of 162 m/min. The average order size was around 20,000 m².

Schattdecor aimed to reach a total output of around 14m m² using the Palis printing machine in 2021 as a whole. The company thinks that it might reach a digital printing volume of up to 25 million m² in the current year. Basic data about the production machine installed at Schattdecor was presented by the technology provider PadaLuma Ink-Jet Solutions GmbH (Palis), based in Markt Erlbach, at the Surface in Motion conference held on 3 and 4 November in Wiesbaden in a presentation on the state of digital printing technology.

Palis and Schattdecor had forged a partnership in spring 2013, which aimed to develop a full-width single-pass digital printing machine for use in decor printing. The first machine was installed and tested at Palis's site in Markt Erlbach in 2014. The printing machine was installed between two rotogravure machines in Thansau by spring 2016 following additional optimisation work. Schattdecor had raised the prospect of ordering a second Palis printer for the Thansau site in summer 2019 after complete handover but shelved this project during 2020.

Interprint using Agfa inks in two digital printers

German decor printer Interprint GmbH (Arnsberg) now produces on two of the three single pass digital printers installed at the Arnsberg location with water-based pigment inks from the industrial inks business division belonging to Agfa N.V. (Mortsel, Belgium). The resulting standardisation achieved in the printing process means that the same decors with varying widths can be produced on the two printers. According to the companies involved, consistent prints with a wide colour spectrum and low metamerism effects can be achieved in this way; such prints are mainly used in the laminate flooring and furniture sectors. By aligning the pigmented inks to the subsequent processing steps of impregnation and coating, there are also no longer any procedure-related limitations.

By contrast, other printing inks are processed on the oldest Interprint system. The three RotaJET digital printers were each supplied by KBA-Digital & Web Solutions AG & Co. KG (Würzburg). Since the beginning of 2015, a RotaJET system with a printing width of 1,680 mm has been in operation; this printer mainly produces decors for laminate/worktop production. This was followed in autumn 2019 by the commencement of production on a 1,380 mm wide RotaJET, which KBA had previously used as a laboratory system. The newest digital printer, with a width of 2,250 mm, was commissioned during the second quarter and has been running in three-shift operation since the end of June.

During development of its water-based printing inks for digital printing applications in the decor paper sector, Agfa cooperated inter alia with the technologies division of Unilin bvba (Wielsbeke, Belgium). The application of pigment inks on production machinery was subsequently optimised through collaboration with KBA. The Agfa ink set was tested both on RotaJET laboratory systems and at the technology centre in Würzburg. In order to improve its positioning in the field of decor paper processing, Agfa also joined the Association of European Producers of Laminate Flooring (EPLF), Brussels, in September 2020.

Interprint: Second treater up and running

The Interprint Group put the finishing touches to a project to install a second treater at the Brazilian firm Interprint do Brasil Indústria de Papéis Decorativos Ltda, headquartered in São José dos Pinhais. Paraná, on schedule in the fourth guarter of 2021. The commissioning process, which has since begun, will significantly increase the company's capacity and production flexibility. Like the first treating line, which has been up and running since the beginning of 2016, the new line was supplied by Vits Technology GmbH. The second line, also 9 ft wide, was ordered in autumn 2020. Interprint also built a new warehouse, approximately 4.000 m³ in size, starting in March, thus creating the conditions for the installation of the new line. Assembly work got under way in October.

On the other hand, work to commission a fourth lacquering system at Interprint Polska Sp.zo.o., based in Ozorków, has been ongoing since September and running slightly behind schedule. The firm has so far only performed test runs on the line delivered by Kroenert GmbH & Co. KG, based in Hamburg, Germany, which features an electron beam curing (EBC) system and an excimer unit. The production of products suitable for sale, which was supposed to happen by the year's end, will likely be delayed until the first quarter.

According to Interprint, these delays are mainly due to the complex nature of this system, which should allow the firm to expand its product range significantly in the medium term. The new line also marks the first time that Interprint is using EBC in Europe.

Interprint currently runs two EBC lacquering units at Interprint Inc., based in Pittsfield, Massachusetts, which make thermoplastic OPP films sold under the "Premeer" brand. Interprint had first installed an EBC system in one of five existing printing machines in the fourth quarter of 2011. Premeer production, which subsequently concentrated on this system, has since moved to a new unit supplied by Faustel Inc., based in Germantown, Wisconsin, that was commissioned last year. The firm is already mulling over its next capacity expansion project.

However, Interprint is to limit its printing on thermoplastic films to the North American site for the time being. Unconfirmed reports suggest that the company was also involved in negotiations about selling shares in the lacquered laminate manufacturer Fine Decor GmbH, based in Oelde, Germany, in recent months, but then withdrew from the process.

Arclin to take over Huber treating project

Arclin Surfaces LLC, which is part of the US resin manufacturer Arclin Inc., based in Roswell, Georgia, is set to continue a project to build a new treating site in Dillon, South Carolina. The OSB manufacturer Huber Engineered Woods LLC, headquartered in Charlotte, North Carolina, had launched this project at the beginning of 2020.

In April 2021, the two companies reached a settlement in a legal dispute that had been ongoing since the beginning of March 2000 regarding a possible violation of trade secrets. In addition to the sales agreement for the investment project, this settlement also included a long-term supply contract

under which Arclin will supply the phenolic films required for the ZIP System developed by Huber for coating OSB.

After the Huber project in Dillon was revealed, Arclin sued Vits Technology GmbH, which had won the contract to supply the treating line, and Huber in the US District Court for the Northern District of Georgia for infringement of trade secrets. According to Arclin, Vits Technology had gained access to technical details used by the company in the Huber project during the previous delivery of a treating line to Arclin. In a second lawsuit filed in the US District Court for the Southern District of Ohio, Arclin had also taken action against Huber's designated resin supplier Hexion Inc, headquartered in Columbus, Ohio. □

Lamigraf facility in China commissioned



New Lamigraf plant in China

(Photo credit: EUWID)

The Spanish decor printer Lamigraf S.A., headquartered in L'Amettla del Vallès, commissioned the first of two presses installed at its new site in Changzhou in China's Jiangsu Province before the end of November 2021. The second press followed in December. The two 4ft-wide presses were supplied by the Chinese subsidiary of Rotodecor GmbH Maschinen- und Anlagenbau; the orders were placed in early December 2020. According to a press release issued at the time, the Lamigraf plant in Changzhou, which was a greenfield project and is designed to have a printing capacity of around 5,000 tpy in the first stage, will mainly supply Chinese customers. Subsequent investments, including the installation of 7 ft-wide printing machines, will boost its capacity to around 15,000 t/year and allow sales to be expanded to other Asian markets.

Until now, Lamigraf has mainly made products at its headquarters in Spain and at two international sites in Bönen. Germany and São Jose dos Pinhais, Brazil. L'Amettla del Vallès presently operates five presses. Four presses were originally supplied by Cerutti S.p.A., based in Casale Monferrato, Italy; the fifth was installed by Rotomec, headquartered in San Giorgio Monferrato, Italy, which has since become part of the Bobst Group S.A., based in Mex, Switzerland. A sixth press, which has recently been offline, was scheduled to come back on stream in January. Two printing machines are up and running in Bönen and two in São Jose dos Pinhais. The two printing machines at the Bönen site, which Lamigraf acquired in the late 1990s, are also Cerutti machines. The Brazilian site, which started production in the second half of 2017, operates two Rotomec machines. The two new printing machines in China brings Lamigraf's total number of printing machines for decor printing to 12.

During the third quarter, Lamigraf ordered a new printing machine from Jagenberg Converting Solutions GmbH, based in Bocholt, Germany, which is to be installed at one of its two European locations by autumn 2022. With a working width of 2,250 mm and a speed of up to 400 m/min, this machine is to have a designed annual capacity of about 4,500 t. Lamigraf's printing capacity will increase to approximately 30,000 t/year with this new investment.

At the same time, Jagenberg Converting Solutions won a contract to modernise five more Cerutti machines. The company had already retrofitted one of the two printing machines in Bönen during the first half of 2021. Along with the second printing machine in Bönen, four machines at its Spanish headquarters will also be updated. This work is to be performed gradually and be wrapped up by the end of 2023.

Jagenberg to buy a stake in Elrond too

Just a few months after acquiring a majority stake in WDB Systemtechnik GmbH (Enger, Germany), Jagenberg Converting Solutions GmbH (Bocholt, Germany) intends to become a shareholder in Elrond GmbH (Schloss Holte-Stukenbrock, Germany). too. Elrond was created at the start of 2021. The two companies signed a letter of intent to this effect in late October. At that time, the deal was supposed to be closed before the year's end. Jagenberg Converting Solutions will get the majority of the shares in Elrond, as well. The stakes held by Elrond's current shareholders will decrease as a result, although the exact stake has yet to be disclosed.

Jagenberg Converting Solutions now owns 70% of the shares in WDB. Both companies entered into negotiations during the first quarter and put pen to paper in late May. The transaction closed with effect from 1 September. Jagenberg Converting Solu-

tions had initially held discussions with Elrond about working together more closely on individual projects. These talks had also led to negotiations about the purchase of a stake during the third quarter. Both WDB and Elrond should continue to operate as independent companies under the umbrella of Jagenberg Converting Solutions.

Jagenberg Converting Solutions was founded in October 2020 to pool printing and coating machinery activities that were previously split among several entities within the Jagenberg Group. Lebbing Engineering & Consulting GmbH, which is based in Bocholt, Germany and has been majority-owned by Jagenberg since 2008, specialises in automation solutions, drive and control technology and retrofits in the paper, printing and converting industry. Jagenberg Converting Solutions has also gained access to a mechanical production facility for printed decors and packaging

by acquiring a stake in WDB. The group intends to expand this engineering expertise as a result of its involvement in Elrond. The goal is to install complete printing and lacquering lines. Elrond has already sold two thin printing/lacquering lines to Likora GmbH, based in Horn-Bad Meinberg, Germany. Jagenberg Converting Solutions has received its first order for a full-width decor printing machine from the Spanish decor printer Lamigraf S.A., based in L'Amettla del Vallès. The company is also in talks with other businesses about similar projects.

Along with providing printing and lacquering machinery for the decor printing and packaging sectors, Jagenberg Converting Solutions also supplies coating technology for lithium-ion batteries used in electric vehicles, among other purposes. This area should generate around two-thirds of revenues in the future, with the other third coming from projects in the decor printing and packaging sector.

Engineered Floors gets licence for design flooring



DLE products

(Photo credit: Hymmen)

The US carpet and design flooring manufacturer Engineered Floors LLC, based in Dalton, Georgia, has secured a digital printing licence from I4F Licensing N.V., headquartered in Hamont, Belgium, At the same time, the company has ordered a Jupiter JPT-C single-pass digital printing machine from Hymmen GmbH Maschinen- und Anlagenbau. This order marks the first time that Hymmen will deliver a complete digital printing machine to a flooring manufacturer in the US. The machine is to be installed in the north of the US state of Georgia, where Engineered Floors already operates several production sites.

Founded in 2009 by former Shaw Industries CEO Robert Shaw, the company intends to perform digital printing of all new material flooring made in North America in the future using the machine. A licence agreement entered into at the same time as the machinery order means that the firm can also use Hymmen's digital printing patents for flooring. These patents also include digital lacquer embossing plus (DLE plus) technology developed by Hymmen that provides digital structuring of surfaces. Engineered Floors has experienced strong growth in recent years by virtue of its own investments and several acquisitions. After building the first plant in Calhoun, Engineered Floors invested in a SAM plant integrated across all production stages in Dalton in 2013. Following several expansion projects, it is now the world's largest individual site making carpet. In 2018, Engineered Floors also commissioned a facility making carpet tiles in Dalton. Design flooring production is pooled in its Engineered Floors Hard Surfaces unit, which sells the Revotec, Triumph and Ensigium product lines.

CFL gets licence and orders Hymmen system

Having finished its new works built in Calhoun, Georgia, USA, Creative Flooring Solutions Holdings Ltd. (CFL) of Shanghai, China, is the second flooring manufacturer in North America to order a "Jupiter JPT-C" single-pass digital printing system from Hymmen GmbH Maschinen- und Anlagenbau. At the same time, the company has entered into a digital printing licence agreement with 14F Licensing N.V. of Hamont, Belgium. This licence permits the use of the digital printing patents held by Hymmen, which are sold through I4F since the conclusion of a cooperation agreement at the end of 2020. These patents also include the Digital Lacquer Embossing plus (DLEplus) technology developed by Hymmen, which enables surfaces to be structured digitally. The Hymmen digital printer is to print directly onto the engineered stone flooring produced at the Calhoun CFL works that was put into operation in the second half-year 2021. The flooring will be distributed on the North American markets under the "Neptune Flooring" brand. The investment in Calhoun further shifts CFL's production focus towards new-material flooring.

Classen has printed more than 100m m² in Baruth

Classen Industries GmbH can now carry out digital printing on up to 25% of its total output at the Baruth laminate flooring mill using two single-pass digital printing machines commissioned in the middle of 2013 and middle of 2015, respectively. Delivered by Hymmen GmbH Maschinenund Anlagenbau, the machines have a daily capacity of up to 80,000 m², even with relatively small batches of up to 500 m².

With a width of 2,040 mm, the machine prints on single-shade paper that is laminated on HDF board in an upstream production stage. Since digital printing began in Baruth, Classen Industries has already printed more than 100m m²; this level was surpassed during 2020. □

Declines in turnover and results at Westag

In the fourth quarter of 2021, Westag AG recorded further year-on-year declines in turnover and results in connection with its continued streamlining of low-margin products and sales channels as well as the ongoing rise in costs for upstream products. Recalculation on the basis of the preliminary figures for the entire year published on 22 February 2022, fourth-quarter turnover was down 3.8% to €55.6m (Oct.-Dec. 2020: 57.8m). Adjusted EBITDA pursuant to IFRS halved compared to the corresponding period in the preceding year to €2.1m (4.2m). For the entire year, turnover thus decreased by 2.1% to €224.3m (2020: 229.1m). Adjusted EBITDA dropped by 41.1% to €10.3m (17.5m) compared to the preceding year.

In its report concerning the preliminary figures, Westag AG did not go into detail about development of its two divisions, doors/frames and laminates/elements. However, it can be inferred from the remarks that the laminates/elements division was more strongly affected by the streamlining measures. It has not yet been possible to fill the capacities that have become available in this division with new, higher-margin business. According to market information, in business with worktops Westag AG has primarily restricted sales via DIY stores. In turn, deliveries to Formica Ltd. (North Shields, Great Britain), which also belongs to Broadview Holding B.V. ('s-Hertogenbosch, Netherlands), have been expanded. The deterioration of results figures was due partly to the decline in sales volumes and partly to the delay in passing on cost increases.

Shortly before publication of the preliminary figures, Westag AG also provided information about a buyback offer for up to 275,778 preference shares planned by the management board and the supervisory board. Over the course of the last two years, Westag has already redeemed preference shares on three occasions. After conclusion of the current buyback offer, the company intends to examine a possible delisting of Westag shares.

Total capacity for decor paper will increase by 50,000 t to around 250,000 t/year

Ahlstrom-Munksjö finalises majority shareholding in Chinese producer

After several delays, Ahlstrom-Munksjö Oyj, based in Helsinki, wrapped up its acquisition of a 60% stake in the Chinese decor paper manufacturer Hebei Minglian New Materials Technology Co. Ltd, head-quartered in Xingtai, Hebei Province, on 14 January 2022.

This agreement was reached in principle in November 2019. After the two sides signed a non-binding letter of intent, they temporarily suspended negotiations because of the pandemic and the preparation of a divestment process for Ahlstrom-Munksjö's Decor Solutions division. These talks did not resume until spring 2021. The contract governing the purchase of a stake was ultimately signed at the end of September.

The remaining 40% of the shares in Hebei Minglian New Materials Technology are to stay with two of the four current Chinese shareholders, at least for the time being. With the signing of the contract, however, Ahlstrom-Munksjö and the future minority shareholders have agreed on an option for the acquisition of further shares. The letter of intent had left open the size of the stake that Ahlstrom-Munksjö was seeking to acquire in the Chinese decor paper producer, which was founded in September 2016. However, a purchase price of around €60m for the entire company had been agreed at that time on a debt-free basis. At its location in Xingtai (Hebei Province), Hebei Minglian New Materials Technology operates a paper machine, which was first brought into operation at the end of 2018. This greenfield investment had marked the company's entry into the decor paper production business. According to Ahlstrom-Munksiö, this machine can now be used in full.

Ahlstrom-Munksjö Decor's total capacity will increase by around 50,000 t thanks to the integration of Hebei Minglian New Materials Technology. It also marks the



(Photo credit: Ahlstrom-Munksjö)

first time that the group has had its own production site in China. Until now, Ahlstrom-Munksjö Decor has operated four sites specialising in decor paper in Aalen-Unterkochen and Dettingen (Germany), Tolosa (Spain) and at the MD Papéis mill in Caieiras (São Paulo, Brazil), which was acquired in mid-October 2018. The Unterkochen and Tolosa sites each run two paper machines that exclusively make decor paper. The two paper machines in Dettingen produce pre-impregnated and decor paper and thin printing papers. The four paper machines in Caieiras make decor paper along with other speciality papers. The Decor Solutions division can also use three paper machines at its location in Arches, France. Two of these machines are producing coloured decor paper; the third one is mainly dedicated to abrasive raw paper. Following the acquisition of the Caieiras mill, Ahlstrom-Munksjö had put the total capacity of its Decor Solutions division at around 250,000 t/ year. The latest announcement before closing the Chinese investment listed the figure at 210,000 t. This disparity is likely due mainly to production shifts in Arches over the past two years.

For Ahlstrom-Munksjö, the investment in a Chinese producer, and the possible direct entry into the Chinese market facilitated thereby, is an essential step in the divestment of decor paper activities announced in mid-September 2019. This divestment had been temporarily suspended due to the corona crisis and to negotiations for the acquisition of the majority of Ahlstrom-Munksjö shares by Spa Holdings 3 Oy. Spa Holdings had acquired 90.59% of the Ahlstrom-Munksjö shares through a public takeover bid concluded in February 2021 and subsequently announced a squeeze-out of the remaining minority shareholders.

Ahlstrom-Munksjö resumed the sale process for the decor solutions business division at the beginning of the second quarter of 2021. The second round is underway. According to unconfirmed information, there are several interested parties, primarily from the private equity sector.

All old machinery has been replaced with new technology in just a few years

Finish foil producer Likora orders another machine from Elrond

Barely a few weeks after commissioning a new printing/lacquering line, the decor printer and finish foil manufacturer Likora GmbH, based in Horn-Bad Meinberg, Germany, has placed a follow-up order with Elrond GmbH, headquartered in Schloss Holte-Stukenbrock, Germany.

With a working width of 910 mm, four printing units and a UV coating system, the technology ordered on 10 December 2021 will be largely identical in design to the printing/lacquering machine that Elrond installed at Likora's site in mid-September and commissioned starting in mid-October. Production had already been ramped up to three-shift operations by the end of October. In turn, the last older line was permanently taken out of service and scrapped.

This step marks the completion of Likora's project to modernise its machinery, which has been ongoing for several years and involved replacing seven older machines from Cerutti S.p.A., based in Casale Monferrato, Italy, and Albert-Frankenthal GmbH, headquartered in Würzburg, Germany, with three new machines. Rotodecor GmbH Maschinen- und Anlagenbau, based in Lage, Germany, delivered the first two machines. A 910 mm-wide printing/lacquering line featuring four printing units and one lacquering unit has been operating since 2016. A 2,250 mm-wide Rotodecor machine with four printing units and two lacquering units followed in the first guarter of 2019. Two Cerutti presses had been shut down at the same time that this large machine was commissioned.

To make room for the first Elrond press, Likora dismantled the last Cerutti press in the second quarter of 2021, which had initially been used as a backup after the large Rotodecor machine came online. The ramp-up of the Elrond technology meant that the remaining Albert-Frankenthal could be taken out of service. This means that Likora currently operates three lines, two of which were supplied by Rotodecor (working widths 910 mm and 2,250 mm) and one by Elrond (910 mm).

By ordering the second machine from Elrond, Likora has now responded to the large Rotodecor machine operating at maximum capacity for some time. Since the company does not operate any laboratory machines, the Rotodecor unit is used to develop decors and match colours from time to time. After commissioning at the end of 2022, the new Elrond machine will handle the majority of decor development and colour matching work in the future, freeing up the capacity of the large Rotodecor machine to focus fully on production orders.

The new printing/lacquering machine is designed to be even more flexible in terms of its equipment and product range than the one commissioned in October. It can use different cylinder widths of up to

910 mm and cylinder circumferences of up to 1,400 mm. A special burner allows both plastic films and pre-impregnated materials to be processed. Likora also wants to equip the new line with a Meyer-Bar blade and an excimer unit.

Elrond will also be responsible for all mechanical engineering as part of the new order. Electrical engineering and the plant control system will again be provided by Elrond's partner Lebbing Automation & Drives GmbH, based in Bocholt, Germany. Once completed, the line will be assembled and tested at Elrond's Schloss Holte-Stukenbrock plant. It is expected to be delivered to the Likora plant in November in pre-assembled modules and installed there alongside the two other narrow lines. The first Elrond line was installed as a mirror image of the narrow Rotodecor machine, so that they can be operated from the same intermediate aisle. The new Elrond plant will be installed at the rear of the first unit. The large Rotodecor machine, on the other hand, is located in a separate hall.



Printing machine in Horn-Bad Meinberg

(Photo credit: Likora)

Another extrusion line and lacquering/embossing station to be commissioned

Schattdecor has bought a 50% stake in furniture foil producer Fine Decor

Schattdecor AG, based in Thansau, Germany, is ramping up its portfolio of thermoplastic surfaces significantly by acquiring a 50% stake in Fine Decor GmbH, headquartered in Oelde, Germany, at the end of September 2021.

Until now, Schattdecor has only printed on plastic film, primary PP, to a limited extent at its Thansau headquarters and in Tarnowo Podgórne, Poland. This PP film is sold under the "Smartflex Nature" name. Kitchen and bathroom furniture are the primary areas of application. The group intends to generate revenues of approximately €1m from these activities in 2021. Schattdecor will also be able to deliver coated and embossed PET-based film that Fine Decor has so far sold as "lacquered laminates" ("Lacklaminat") in the future by acquiring the stake in Fine Decor. This film is laminated onto a woodbased panel substrate and used primarily as an alternative to lacquered furniture fronts. Fine Decor delivers the majority of this film to Italian producers, which in turn primarily supply the German kitchen furniture industry with parts and fronts.

Fine Decor's portfolio has so far been limited to plain-colour surfaces. Schattdecor's involvement should allow PET-based film to be printed and lacquered in the future, too. Tests to this effect had already been performed using a printing machine in Thansau over the past few months: the film was then refined at Fine Decor in Oelde. According to Schattdecor, the laboratory lacquering line in Thansau and printing/lacquering machine PMD42 at its plant in Tarnowo Podgórne could be used for these stages in the future. Samples produced during these test runs were first showcased at the Sicam fair, which was held in Pordenone, Italy, from 12 to 15 October. The planned addition to its product range will also entail a change in the product's name to "Fineflex". In the next step, the plan is to switch to industrial-scale printing of PET-based film.

Schattdecor and Fine Decor GmbH put pen to paper on the contract on 28

September. The deal did not have to be reviewed by anti-trust authorities, and there were hardly any other conditions. The transaction thus closed in the first week of October. Fine Decor will continue to operate in its current structure now that Schattdecor is on board.

The affiliates FineLine Innovation GmbH, headquartered in Oelde, and Fine Decor Plastik San. Ve Tic. Ltd. Sti., based in Istanbul, Turkey, had merged with Fine Decor GmbH in 2020. All production and distribution operations have since been operated by a single company. Founded in 2004 as an import merchant based in Bielefeld, Germany, Fine Decor GmbH imported PVC surfaces made by Asian producers and sold them to the furniture industry. PET-based film was added to its portfolio back in 2005. In the past few years, its range of products has increasingly shifted towards PET until the marketing of PVC film stopped altogether.

In 2009, the company founded an affiliate in Turkey, which also specialised in importing furniture surfaces. It built its own €35m PET film production facility in Oelde via FineLine Innovation GmbH in 2019. This plant solely uses recycled PET as feedstock. Fine Decor continues to work with traditional PET film in the retail business. Its Oelde plant, which was commissioned at the end of 2019, presently runs an extrusion line with a downstream lacquering and embossing station. Its annual capacity is listed at approximately 6m m². The firm plans to install another extrusion line and lacquering/embossing station in the production hall by the first quarter of 2022, roughly doubling capacity. Like the existing line, the new technology will have a working width of 160 cm. As Fine Decor planned when it started manufacturing, another production hall is to be built in Oelde by 2024. The technology earmarked for this project will have a wider working width.



Production site in Oelde

(Photo credit:Fine Decor)

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Alpagroup launched at the start of 2022



Alsapan laminate flooring plant

(Photo credit: EUWID)

Alpagroup, which ensues from the merger of furniture and particleboard producer P3G Industries S.A.S. (Saint-Loupsur-Semouse) and furniture parts and laminate flooring manufacturer Alsapan S.A.S. (Dinsheim-sur-Bruche), commenced operations on 1 January 2022. A total of twelve companies are consolidated under the new holding company. In France, besides Alsapan, these are particleboard manufacturer CF2P S.A.S. (Lure), flat-pack furniture manufacturer Parisot Industrie S.A.S. (Saint-Loup-sur-Semouse) and its subsidiary Ekipa, online kitchen retailer Cuisinet, Elsa Profil (Dinsheim-sur-Bruche) - which specialises in the production of profiles and wood-coated narrow components - and tool manufacturer Diamonde et Gilllen (Marlenheim, Cluses). In Romania, Alpagroup comprises upholstered furniture manufacturer Greencorp, previously part of P3G, and furniture manufacturer Artemob International, In Asia, the Hong Kong-based company Anavil, which specialises in the distribution of bathroom and garden furniture, is part of the new holding company. The two joint venture companies Alsastep and Newline Tops also belong to the Alpagroup. Alsastep was founded in 2020 together with a Belgian company and specialises in the production of vinyl flooring. Last year, Alsapan, together with a US company, founded the joint venture Newline Tops, which specialises in the production of worktops. The company is headquartered in Rome, Georgia. The Alpagroup currently comprises a total of 18 production locations. The number of employees is stated at 4,300, of which 2,000 are in France.

The previous shareholders of Alsapan and P3G each have a 50% stake in the new holding company. For the next five years, the management team will consist of Jean-Charles Parisot as president and Cécile

Cantrelle as directrice générale. After five years, Cantrelle and Parisot will swap their respective positions.

The two companies had announced the merger plans in May 2021. Approval by the French competition authority followed in November. No site closures or job cuts are planned in the course of the merger. According to earlier statements, the merger is the response of P3G and Alsapan to the increasing consolidation on the side of suppliers and purchasers. This had already been under consideration several years ago. The project then came back into focus against the background of supply and delivery problems resulting from the corona crisis. With the merger. the two companies want to cover the entire value-added chain in future from particleboard to finished furniture. As Alpagroup also confirmed on request, the company is currently participating in the bidding process for French dismantled furniture manufacturer Meubles Demeyère S.A. (Pérenchies), which has been insolvent since the beginning of December. However, the bid submitted by Alpagroup relates exclusively to the Demeyère locations in the Lille commune in the north of France. □

Six bids for flat-pack producer Demeyère

A total of six companies had submitted a bid for insolvent flat-pack furniture manufacturer Meubles Demeyère S.A. (Pérenchies) by 21 January 2022. According to French media reports, two companies are interested in a complete takeover of Demeyère: interior construction company ABSO S.A.S. (Labastidette) and Moroccan plywood manufacturer Cema Bois de l'Atlas (Sidi Maârouf, Casablanca). On the other hand, French garden furniture manufacturer Innovaxe S.A.S. (Neuville en Ferrain) and Alpagroup, a company ensuing from the merger of P3G Industries S.A.S. (Saint-Loup-sur-Semouse) and Alsapan S.A.S. (Dinsheim-sur-Bruche), only intend to take over the locations in the north of France. The Market Maker group of companies, which is based near Lyon and manufactures upholstered furniture among other products, has expressed interest in the Nersac site in western

France. In contrast, French Groupe Lapeyre S.A.S. (Aubervilliers), which focuses on the manufacture and sale of furniture and interior design products, is interested only in machinery and equipment.

The Tribunal de Commerce in Lille is expected to announce the successful bidder in March. At the beginning of December, the company, which currently employs approximately 750 persons, filed an application for the initiation of restructuring proceedings; this was granted by the court on the same day. The liquidity shortages were attributed to factors such as turnover declines and increased costs for upstream products. In France, Demeyère operates three production sites in Pérenchies, Lompret and Nersac as well as a 25,000 m² logistics centre in Deûlémont and a 45,000 m² warehouse in Linselles. With the exception of the Nersac factory, all French sites are located in the Lille commune. The Nersac factory in the northwest of France, which covers an area of 30,000 m² including a 6,000 m² warehouse, was taken over by Demeyère in 2007 from the insolvency assets of furniture manufacturer Domoform (Montmorillon). Domoform was established at the end of the 1980s from the merger of flat-pack furniture manufacturer Ranger (Montmorillon) and kitchen furniture manufacturer ICM Industrie (Nersac); at the time of the takeover by Demeyère, Domoform was part of Snaidero Rino S.p.A. (Majano, Italy). Outside France, Demeyère also operates a 10,000 m² factory in Ho Chi Minh City (Vietnam), where furniture has been manufactured under the name Meubles Demeyère Vietnam (MDV) since 2008. The products manufactured in Asia are sold via Demeyère's Chinese subsidiary Cal-Scan (Shenzhen, Guangdong province), which was established back in 1982.

Livos buys Lechner with effect from 1 March



Rothenburg site

(Photo credit: Lechner)

The Livos Group has received the goahead to acquire business operations from the worktop manufacturer D. Lechner GmbH and its parent company Lechner Holding AG, both based in Rothenburg ob der Tauber, Germany. Its selection comes after the process of selling these entities began towards the middle of December 2021. Insolvency administrator Dr Hubert Ampferl and Livos representatives put pen to paper on 4 March. This binding contract is not subject to any conditions, meaning that the transaction closed retroactively to 1 March. At that time, the assets of the two Lechner entities, a property in Rothenburg, business operations, the

independent production firm Lechner Svenska Holding AB, headquartered in Strömsnäsbruk near Markaryd, Sweden, and another Lechner subsidiary were transferred to Livos. The deal does not include the Hungarian manufacturing entity Lechner Hungary Kft., based in Budapest, Hungary. The administrator is currently in additional negotiations to possibly find a regional solution for the plant.

Following the transferred restructuring in early March, Livos will maintain activities acquired in the asset deal via a new firm, Lechner GmbH. In the view of Dr Ampferl, this step will ensure that business operations continue. Its portfolio of products and its core markets in Germany, Austria, Switzerland and France will be retained. Florian Mitzscherlich from Livos and Hartmut Müller were appointed as managing directors of Lechner GmbH. Müller served as chairman of the board for the listed automotive part supplier Grammer AG, headquartered in Amberg, from 2010 to the middle of 2018.

Lechner's workers were informed about the outcome of the sales process in a staff meeting held on the afternoon of 4 March. The new company Lechner GmbH and Lechner Svenska will continue to employ around 600 workers. In consultation with the Lechner works council, the insolvency administrator shed roughly 30 jobs in Rothenburg by the end of February as part of the insolvency proceedings that began on 1 February. The affected workers left through dismissals and severance agreements.

The sales process, which was coordinated by the consulting firm Pricewaterhouse-Coopers (PwC), had attracted several potential investors. Unconfirmed reports suggest that other worktop manufacturers from Germany and other countries, including companies from neighbouring Eastern European nations, had signalled their interest. However, they were solely interested in buying individual Lechner sites. According to the administrator, Livos won out because it offered the best concept and bid. The results should fully satisfy key creditors' claims.

Tvilum ends part-time earlier than expected

Danish flat-pack furniture manufacturer Tvilum A/S ended the part-time working arrangement introduced in mid-October 2021 concerning production at its headquarters in Fårvang after just five weeks. The arrangement, which affected 250 of the 390 employees at the location, was the company's response to factors such as lower demand from larger furniture retail chains in several European countries since the beginning of September and poorer development of US e-commerce business. Working hours of the affected employees had therefore been reduced by about 50% by alternating on a weekly basis between production shifts and shifts off.

The arrangement was originally to be maintained until the end of the year. According to Tvilum CEO Torben Porsholdt, however, incoming orders had already picked up noticeably in November and the measure could be

revoked earlier than originally planned. The number of job cuts planned in the course of a product range streamlining at Steens Group A/S in Kjellerup, which was taken over at the end of May 2021, has meanwhile been reduced from the initially planned 50 to 35. Ten of these employees will relocate to the Tvilum site in Fårvang.

At the time of the takeover, 180 persons were employed at Steens Group. According to Porsholdt, the Steens portfolio was streamlined mainly by removing low-margin products. Overall, the product range was reduced by around one-third. Porsholdt still sees potential for growth in the children's furniture segment, an area in which Steens Group is currently more strongly represented than Tvilum.

In addition to its headquarters in Fårvang, Tvilum also operates a factory

in Kjellerup. In Kjellerup, Tvilum manufactures exclusively for the lkea Group with 100 employees. In Fårvang, approximately 390 persons are employed in production. Another 130 employees work for Tvilum in the Polish factory in Szczecinek. While Tvilum mainly uses particleboard in the production of its furniture, Steens products are mainly made of pine timber and MDF.

In the 2020 financial year, Tvilum had increased its turnover by approximately one-fifth to DKK1.309bn (2019: 1.074bn), equivalent to around €176m. The company is expected to have concluded 2021 with organic turnover growth of around 10%, according to Porsholdt. After a strong first half-year, demand tapered off in autumn but picked up again towards the end of the year. Steens Group's 2020 turnover had amounted to DKK298m, equivalent to around €40m.

Growth in Chinese imports caused Poland to fall to second place in statistics

German furniture exports increased by almost 15% in full year of 2021

Over the entire period of 2021, the value of German furniture exports increased by 14.7% to €8.380bn (2020: 7.305bn).

Exports to the French market rose by one-fourth to €1.399bn (2020: 1.113bn). Exports to other important European purchasing countries such as Austria (+12.7% to €1.034bn), the Netherlands (+12.8% to €896.7m), Great Britain (+16.0% to €503.4m), Italy (+13.4% to €304.6m), Spain (+21.8% to €252.8m) and Poland (+22.1% to €247.8m) also improved at double-digit rates. Increases high in the single-digit percentage range were recorded concerning exports to Switzerland (+9.3%

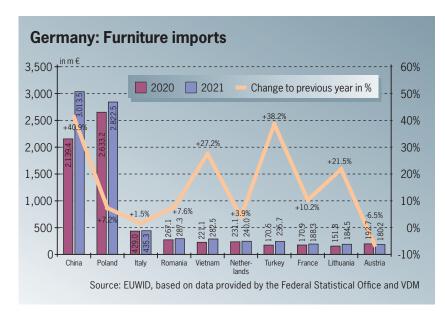
to €1.173bn) and Belgium (+8.9% to €457.8m). Disproportionately high growth rates were achieved e.g. with regard to exports to different Skandinavian countries such as Denmark (+23,8% to €113,3m), Sweden (+23,3% to €111.6m) and Finland (+21.8% to €60.1m). Exports to the Norwegian market, however, rose by only 4.4% to €46.0m (44.1m). Exports to various non-European export markets such as the USA (+13.2% to €252.0m), China (+5.4% to €159.9m), Russia (+7.6% to €87.5m), Saudi Arabia (+19.7% to €40.9m) also increased.

German furniture imports in 2021 rose by 18.1% to a total of €10.171bn (8.613bn). Imports from China rose at an above-average rate of 40.9% to €3.013bn (2.139bn). Since the Verband der Deutschen Möbelindustrie (VDM), Bad Honnef, reported that imports from China only rose at approximately half of this rate in terms of volume, the increase in value is partly a result of higher prices. The significant growth in Chinese furniture imports caused Poland (+7.2% to €2.823bn) to fall to second place in the import statistics.

The value of deliveries from Vietnam (+27.2% to €282.5m), Turkey (+38.2% to €235.7m), Lithuania (+21.5% to €184.5m) and India (+64.5% to €162.7m) also rose at over-proportional rates last year. By contrast, less significant growth rates were recorded in imports from Italy (+1.5% to €435.3m), Romania (+7.5% to €287.3m), the Netherlands (+3.9% to €240.0m), France (+10.2% to €188.3m), Slovakia (+10.2% to €169.0m), the Czech Republic (+1.7% to €152.5m) and Switzerland (+4.1% to €143.2m).

Imports from Austria (-6.5% to €180.2m), Denmark (-2.7% to €177.3m), Hungary (-2.3% to €163.6m) and the UK (-5.2% to €94.4m) even decreased compared to 2020. \Box





VDM anticipates stronger growth in 2022 as a result of price effects

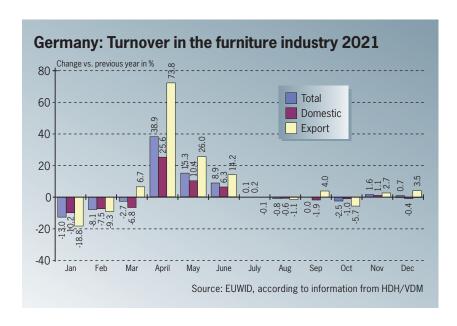
German furniture industry ends 2021 with 2% rise in turnover

The German furniture industry concluded the full year 2021 with a turnover increase of around 2% to €17.5bn (2020: 17.2bn).

Development was thus better than initially expected by the Verband der Deutschen Möbelindustrie (VDM), Bad Honnef. Per mid-year, the association had still anticipated turnover to stagnate at the level of the preceding year. Starting from the €17.9bn achieved in 2019, industry turnover in 2020 had declined by 3.8% due to the corona crisis. According to VDM, last year German furniture manufacturers benefited from factors such as order backlogs from 2020, which had accrued as a result of a generally strong second half of the year.

Export business was the main contributor to growth last year. While domestic turnover increased by just 0.5% to €11.9bn due to the lockdown in Germany, which persisted into May in some cases, export turnover increased by 5.3% to €5.7bn. As a result, the export rate rose by one percentage point to 32.2% (31.2%).

The individual segments also developed along varying lines. Upholstered furniture manufacturers achieved double-digit turnover growth of 12.7% to approximately €1.0bn. Kitchen furniture manufacturers (+8.7% to €5.7bn) and manufacturers of shop and contract furniture (+8.0% to around €2.1bn) recorded increases high in the single-digit percentage range. The office furniture industry increased turnover by 3.7% to approximately €2.0bn, and mattress manufacturers by 3.6% to €779.5m. By contrast, in the miscellaneous furniture segment - which is the largest segment and includes products such as living room, dining room and bedroom furnitu-



re as well as furniture parts, a turnover decline of 7.7% to €5.9bn was recorded.

In the case of incoming orders, varied development was also recorded. According to internal surveys conducted by the Herford-based trade associations Verband der Deutschen Küchenmöbelindustrie (VdDK), Verband der Deutschen Polstermöbelindustrie (VdDP) and Verband der Deutschen Wohnmöbelindustrie (VdDW), orders received by kitchen furniture manufacturers rose by 6.8% (domestic: +0.5%; export: +15.7%). In the upholstered furniture industry, an increase of 1.5% (domestic: -3.7%; export: +19.3%) was recorded. By contrast, orders received by living room furniture manufacturers declined by 12.3% (domestic: -15.8%; export: -2.9%). According to the VDM, the more negative results compared to the turnover statistics are attributable to factors such as the high level of orders in hand at the end of 2020. Furthermore, unlike the turnover statistics, the association surveys also take into account foreign production sites of German manufacturers and the

German sales companies of foreign manufacturers.

For 2022, the VDM anticipates stable development in terms of volume. However, due to the price adjustments planned by furniture manufacturers to compensate for the sharp cost increases in the areas of upstream products, logistics and energy, the association expects a nominal turnover increase of approximately 10% for the current year.

One of the industry's concerns is the ongoing tense situation regarding the supply of upstream products. According to a recent survey conducted by the association, 44% of companies surveyed reported limited or delayed production in January due to material shortages. Furthermore, the increasing shortage of skilled workers is causing problems for companies. More than half of the manufacturers surveyed are unable to completely fill their apprenticeship positions; around 80% report shortages of skilled workers and expect this situation to worsen in the coming years due to the age structure within the companies.

E-commerce sales in furnishings more than doubled within the past five years

Germany: Furniture turnover generated online up by one-fifth

In the entire year 2021, e-commerce turnover generated with furniture, lamps and decoration increased by 21% to €6.564bn (2020: 5.425bn) gross (including VAT).

This means that the growth of 15.0% achieved in this segment in 2020 could be increased upon again, according to data collected by the Bundesverband E-Commerce und Versandhandel Deutschland (bevh) in cooperation with Beyondata GmbH (both Berlin). Household goods/appliances (+25.6% to €7.280bn) and soft furnishings/home textiles (+20.3% to €1.748bn) also exceeded the previous year's respective growth rates of 16.9% and 16.5%.

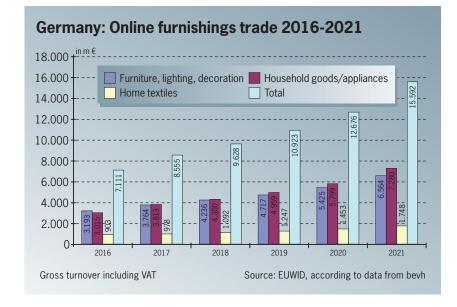
Concerning the furnishings product group cluster overall, an increase of 23.0% to \leq 15.592bn (12.676bn) was recorded. In 2020, growth of 16.1% had been achieved in this cluster. In 2016, just \leq 7.111bn had been generated online with furnishing products. The value has thus more than doubled within the past five years. In the fourth quarter, turnover in the furnishings product group cluster

rose by 12.2% to €4.274bn (Oct.-Dec. 2020: 3.808bn). This meant the growth rate reduced further compared to the previous quarters. After increases of 42.8% in the first guarter and 25.1% in the second, growth in the third quarter had already slowed to 17.6%. However, the basis of comparison must be taken into account when considering the growth rates, as demand had picked up considerably in 2020, especially in the second half of the year. In the furniture, lamps and decoration product group, turnover in the fourth quarter increased by 13.2% to €1.825bn (1.612bn). In the first two quarters, the increases had amounted to 28.9% and 27.4% respectively; in the third quarter, growth of 16.1% had been achieved. In the case of household goods/appliances, the preceding year's figure was exceeded by 13.0% to €1.675bn in the fourth quarter. The increase was thus similar to that recorded for furniture, lamps and decoration. In the first quarter, turnover generated with household goods/appliances had increased by a significantly over-proportional rate of 58.2%; growth rates were more moderate in the second and third quarters, at 21.3% and 20.0% respectively. Concerning soft furnishings/home textiles, after an increase of 41.0% in the first quarter, 31.5% in the second and 10.2% in the third, the growth rate dropped into the single-digit percentage range in the fourth quarter for the first time in 2021, at +6.9% to €557.0m (521.0m).

Overall e-commerce turnover generated with goods in Germany increased by 19.0% to €99.1bn (83.3bn) in 2021. In addition to the furnishings segment, overproportional growth was also achieved in everyday use products such as groceries, pharmacy goods and pet supplies (+36.4% to €9.404bn).

At €50.5bn (42.1bn), around half of the e-commerce turnover was generated with goods via online marketplaces. This corresponds to an increase of 19.9% vis à vis 2020. In a comparison of the various seller types, the strongest growth was recorded in the case of producersellers (+25.4% to €3.404bn) last year; however, the proportion of total turnover attributable to this seller type remains low at 3.4% (3.3%). Online retailers - which, in addition to companies operating exclusively online, includes mail-order pharmacies and shopping clubs - increased their turnover by 18.4% to €29.5bn (25.0bn). The proportion of total turnover attributable to these retailers thus rose to 30.0% (29.8%).

For 2022, the bevh presently expects total e-commerce turnover generated with goods to increase by 12% to over €110bn. This would bring the increase back closer to the pre-pandemic growth rates. The association puts the long-term average at 11%. In addition to ongoing disruptions in the supply chains, consumer concerns regarding inflation could also negatively influence purchasing trends in the current year.



Lengthy lockdown period had a major impact on sales via large-scale stores

Growth for German kitchen furniture manufacturers especially abroad

In the 2021 financial year, the three large kitchen furniture manufacturers Nobilia-Werke J. Stickling GmbH & Co. KG (Verl), Häcker Küchen GmbH & Co. KG (Rödinghausen) and Schüller Möbelwerk KG (Herrieden) each recorded turnover increases high in the single-digit or just in the double-digit percentage range.

Increase rates thus exceed those recorded in 2020, when growth had been slowed down especially by restrained development in exports. On the domestic market at that time, by contrast, increase rates in the high single-digit percentage range had been achieved. The trend observed in previous years, of export growth rates generally being higher than growth rates on the German market, was reversed for the first time in 2020. Due to the clear double-digit increase rates recorded in exports in 2021, however, that trend already changed again last year. Whilst the economic upturn in Germany already started in mid-2020, demand on the export markets only recovered over the course of last year.

At Nobilia, domestic turnover in 2021 actually declined by 2.2% to €695.5m (2020: 710.9m). This is attributed to the lengthy lockdown period in the brick-and-mortar furniture trade, which had a particularly strong impact on the company's important sales channel via large-scale stores. The company therefore further expanded its sales through kitchen specialists in 2021. Export turnover, on the other hand, rose by 19.4% to €786.6m (658.9m) and thus exceeded domestic turnover for the first time. Total turnover increased by 8.2% to €1.482bn (1.370bn). The export rate rose to 53.1% (48.1%). In 2020, Nobilia had recorded a 6.4% increase in total turnover. At that time, positive development had ensued particularly from domestic activities, which increased by 9.9% whilst exports had risen by only 2.8%.



(Photo credit: EUWID)

At Häcker, exports in the 2021 financial year increased by 17.5% to €281m (239m) and thus almost twice as much as the growth of 9.6% to €446m (407m) recorded on the domestic market. Total turnover rose by 12.5% to €727m (646m). The export rate increased to 38.7% (37.0%). In 2020, export turnover had declined marginally by 0.4% whereas domestic turnover had increased by 8.2%. In terms of total turnover, Häcker had recorded an increase of 4.9%.

At Schüller, the contrast between development of domestic and export activity last year was even more significant. A 31.8% increase to \in 197.0m (149.5m) in export turnover contrasted with a 5.1% increase to \in 474.5m (451.3m) in domestic turnover. Overall, the company concluded the 2021 financial year with growth of 11.8% to \in 671.5m (600.8m). The export rate increased by 4.4 percentage points to 29.3% (24.9%). In 2020, by contrast, exports had risen by 4.6% and thus at only half the rate of 9.8% recorded on

the domestic market. Total turnover had increased by 11.8%.

The kitchen industry as a whole also benefited in 2021 from high demand from export markets. For the past year, industry association Verband der Deutschen Küchenmöbelindustrie (VdDK), Herford, reports an increase in export turnover of 18.6% to €2.497bn. The euro zone countries accounted for €1.913bn thereof. Compared to 2020 this corresponds to an increase of 15.5 % Domestic turnover, in contrast, rose at a comparatively low rate of 2.1% to €3.211bn. Total turnover increased by 8.7% to €5.708bn. As a result of the better development outside the domestic market, the export rate increased to 43.7% (40.0%). In 2020, development had been exactly the opposite. At that time, domestic turnover had increased by 7.6% to €3.146bn, whilst export turnover had declined marginally by 0.1% to €2.105bn. Within the euro zone, however, growth of 1.7% to €1.657bn was achieved. Total turnover had increased by 4.3% and thus only half as much as last year.

Spiralling material costs leading particleboard industry to outline fresh plans for markups

Furniture industry falls further and further behind in raising its own prices

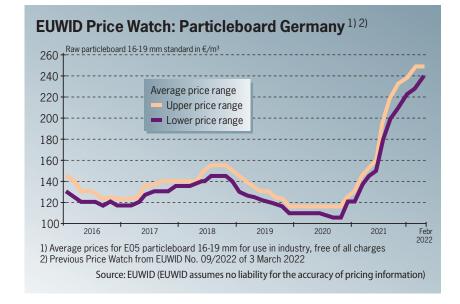
Particleboard prices have been on an upward trajectory since the third quarter of 2020, and this situation looks set to continue in the second quarter, too.

Buyers had expected things to ease during the first half of this year, but it appears that relief is still a long time coming. The counter-arguments recently raised by buyers in the furniture and construction element industry, such as more abundant supply from their perspective, are typically not leading particleboard manufacturers to make changes. Constraints that still exist in other European markets continue to offer alternatives. One focal point is Italy, where a few particleboard manufacturers have had to scale back production in recent weeks due to gaps in their supply of recycled wood. The growing crisis in Ukraine could also lead to a shift in the flow of goods in Eastern Europe. This diversion of volumes would open up additional export sales opportunities for Central European manufacturers.

There is even more uncertainty about how the Ukraine crisis might affect the supply of

raw materials. Economic sanctions against Russia could lead to a reduction in the supply of natural gas, urea and methanol to Europe, thereby putting an end to stable chemical raw material prices that have emerged in recent months. Procurement prices for urea gradually subsided in January and February after sharp hikes last year. Methanol contract prices edged only slightly higher in the first quarter. On the other hand, melamine prices rose sharply in the first quarter. There are no signs of decor paper prices subsiding, either; with delivery times remaining long, decor paper manufacturers and printers are currently implementing additional price increases. While particleboard manufacturers had primarily cited rising chemical raw material, surface material, energy and logistics costs in price talks during the second half of the year, their rationale has shifted to timber prices in the course of the first guarter. Prices for all types of pulpwood used to make particleboard have climbed more and more since the fourth quarter: a few prices have more than doubled within the span of a few months. At the same time, the supply situation has taken a marked turn for the worse. Buying competition from the energy sector and the pellet industry might even intensify amidst volatile energy markets.

Rising timber costs are also in the spotlight during negotiations that are now beginning about the next particleboard contracts. Even though quarterly agreements are in place, some manufacturers want to elevate their prices during March: other companies will tack on more from April at the latest. Most suppliers are mentioning markups of around 5-10%. A variety of converters think that these demands are no longer justified since particleboard producers have significantly improved their margins with last year's hikes. Financials published by a variety of wood-based panel manufacturers in recent weeks have been cited as evidence. However, the companies in question maintain that last year's growth in earnings was connected to low baseline figures recorded in 2020. These rates have now reversed course in recent months. These narrower margins would now have to be offset by raising prices. As a result, converters now had to pass on higher purchasing costs to their own customers. This prospect is made more difficult in the furniture sector by the fact that companies had entered into longer-term agreements with trade cooperatives that still applied. Various furniture manufacturers had already invoiced more during the course of last year; price hikes were then instituted to a greater extent in new full-year contracts negotiated in the fourth quarter. However, several kitchen and furniture manufacturers feel that these markups are already insufficient to compensate for cost increases that have already occurred or have been recently announced for numerous preliminary products. Additional mid-year price adjustments may become necessary in the coming months as a result. However, both furniture and particleboard manufacturers see a risk of higher prices for end consumers slowing demand, which is already cooling in a few market segments.





i4F licenses the world's most advanced digital printing technologies delivering results so close to the real thing it's almost impossible to tell the difference. Cutting-edge technologies available from i4F enable the creation of unique designs and avoid unnecessary inventory on pre-printed materials.

i4F's strong digital printing portfolio now also includes exclusive access to all **Hymmen** digital printing technologies, including its award-winning Digital Lacquer Embossing (DLE) technology offering unbelievably real optics and haptics.



PATENTS & TECHNOLOGIES

In 2021, total global sales increased by 5.3% in a year-on-year comparison

EPLF: Russia replaces Germany as the largest sales market for laminate flooring

Laminate flooring manufacturers belonging to the association of European Producers of Laminate Flooring (EPLF) sold 483.4m m² of laminate flooring from their European mills last year.

The first quarter ended with a 14.1% improvement to 125.2m (Jan.-March 2020: 109.7m) m². Sales then increased by as much as 21.4% to 124.1m (April-June 2020: 102.2m) m2 in the second quarter. Manufacturers sold slightly less in the third quarter, with a 2.8% decline to 123.5m (July-Sept. 2020: 127.0m) m² due to the high baseline in the previous year. Cumulated over the first three quarters, the EPLF members raised their sales volume by 10.0% against last vear to 372.8m m² (Jan.-Sept. 2020: 338.8m m²). The fourth quarter was even weaker than Q3, with a drop of 8.0% to 110.6m (Oct-Dec 2020: 120.2m) m². The year as a whole closed with a 5.3% growth in sales. According to EPLF estimates, the growth rate could have been even higher had there not been restrictions in HDF supply and logistics during the year.

Despite the Covid-19 pandemic, laminate flooring sales had edged 2.7% higher to 459.0m m² in 2020 after a decline lasting more than three years. Growth had risen at twice that rate in 2021, allowing EPLF members' sales to return almost to 2010's level (486.7m m²). Five years of decline had followed that year (2011: -3.9%, 2012: -1.8%, 2015: -3.1%, 2018: -4.9%, 2019: -1.5%). Laminate flooring sales had been higher than the previous year in five years (2013: +0.7%, 2014: +0.9%, 2016: +5.5%, 2020, 2021); sales volumes were almost stable in 2017.

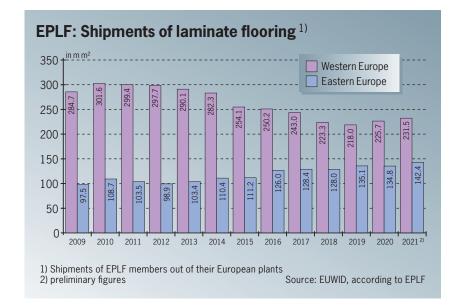
All regions apart from North America made varying contributions to last year's growth. Some 231.5m (225.7m) m² of laminate flooring were sold in Western European markets, 2.6% more than in 2020. Sales in Eastern Europe increased by 5.6% to 142.4m (134.8m) m². By contrast, deliveries to North America were 12.9% lower at 42.7m (49.1m) m². The EPLF blamed this slump on a few

member companies shifting their exports from Europe to newly built or expanded North American mills. Significant double-digit increases were recorded in Latin America (+61.6% to 22.8m m²), Africa (+22.9% to 5.7m m²), Asia (+30.4% to 32.7m m²) and Oceania (+12.8% to 3m m²).

Germany bucked the trend with a 6.1% downturn in laminate flooring sales to 49.4m (52.7m) m² and was overtaken by Russia as the single-largest market for EPLF members. Russia sold 53.6m (46.2m) m² of laminate flooring, 16.2% more than in 2020. It was followed by France (+13.3% to 42.0m m²), the UK (-5.7% to 34.9m m²), Poland (+3.6% to 30.0m m²) and the US (-21.4% to 29.9m m²).

The next largest markets in Western Europe were the Netherlands (+0.1% to 21.2m m²), Spain (+12.4% to 16.3m m²), Turkey (+17.1% to 13.7m m²) and Belgium (+15.9% to 9.2m m²). Sales in other Western European markets were up 2.4% at 44.4m m². Germany (21%), France (18%) and the UK (15%) together accounted for 54% of total laminate flooring sales in Western Europe. The two largest markets in Eastern Europe, Russia (38%) and Poland (21%), were responsible for 59% of total sales combined. The next largest markets were Romania (+3.1% to 9.8m m²), Ukraine (-18.6% to 8.4m m²), Hungary (+0.2% to 7.7m m²) and, some distance back, Slovakia (+2.3% to 4.4m m²), the Czech Republic (+10.0% to 3.7m m²) and Bulgaria (-0.4% to 3.5m m²). Other Eastern European markets achieved a 0.5% rise to 20.8m m².

The downturn in North America was exclusively rooted in much weaker business with the US; the EPLF figures showed a 16.8% upturn in shipments to Canada to 12.8m m². □



Growth of almost 30% in polymer rigid SPC and polymer LVT clic categories

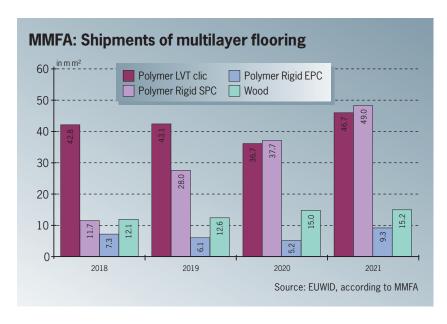
MMFA member sales shift further in direction of SPC/EPC products

The 28 ordinary member companies of the Multilayer Modular Flooring Association (MMFA), Brussels, which has now been in existence for ten years, sold 120.2m m² (2020: 94.5m m²) of multilayer modular flooring globally last year.

The individual product categories contributed to this overall growth of 32% to varying degrees. The shift towards SPC products has intensified. For EPC products, the downward trend recorded over previous vears was balanced out thanks to stronger growth. Concerning multilayer design flooring with wood-based core layers (wood category), which are sold primarily in the DACH region, sales volumes only increased by a slight 1.6% to 15.2m m² (15.0m m²). The polymer LVT clic category, which covers flexible LVT flooring with click connection, increased by 27.2% to 46.7m m² (36.7m m²) following slightly declining development in the preceding year. Even stronger growth was recorded in the case of rigid products. Sales of polymer rigid SPC increased by 30.0% to 49.0m m² (37.7m m²). In the polymer rigid EPC category, significant growth of 79.3% to 9.3m m² (5.2m m²) meant that the downward trend of the past two years was more than offset.

Thus, 40.7% (39.9%) of the total sales volumes of MMFA members last year was attributable to the polymer rigid SPC category. At 38.8% (38.8%), the proportion attributable to the polymer LVT clic category was almost identical to that of the preceding year. The wood category dropped more than three percentage points compared to the previous year, accounting for a proportion of just 12.7% (15.9%); on the other hand, the proportion attributable to EPC products increased to 7.8% (5.5%).

In 2020, total sales volumes of MMFA members had increased by 5.3%. Growth



had been recorded for SPC products (+34.8%) as well as in the wood category (+18.8%). In contrast, sales of LVT flooring with click connection had declined by 14.8%. For EPC products, the MMFA had recorded a similar decrease of 14.3%. This came after EPC sales had already declined by 14.9% in 2019. In the other three categories, the preceding year's figures had been exceeded to varying degrees. Sales of SPC products had more than doubled in 2019, with an increase of 136.2%. Increases of 6.1% and 5.2% had been recorded for products with woodbased core layers and for LVT flooring respectively, resulting in overall growth of 23.3% to 91.6m m². 2018 had been concluded with total sales of 73.8m m². MMFA members thus increased their sales by 62.9% over the last three years.

The continued rise in membership numbers has also contributed to this cumulative growth rate. The Swiss Krono Group and ADO Floor & Film (Antalya) joined last year as two additional producers of multilayer design flooring. The accession of Impress Surfaces GmbH (Aschaffenburg) and Interfloor Ltd. (Rossendale,

Great Britain) also brought the number of associate members up by two to a total of 32. Together with the three supporting members, the MMFA now has a total of 63 members from 13 European countries. In 2020, US-based company US Floors Inc. (Dalton, Georgia) and five associate members had joined. The MMFA was founded on 26 October 2012 by a total of seven manufacturing companies.

In Western Europe, MMFA members sold a total of 53.9m m² (37.5m m²) of polymer products (categories LVT clic, SPC, EPC) last year, corresponding to an increase of 43.7% vis à vis 2020. In North America, sales of polymer products increased by just 14.9% to 40.8m m² (35.1m m²). Eastern Europe accounted for 6.1m m² and Asia for 2.0m m². In Australia/Oceania (811,617 m²), Africa (654,124 m²) and Latin America (634,731 m²), polymer sales remained below 1m m² in each case. As in previous years, the most important sales markets by far for products with woodbased core layers were Germany (-1.2% to 10.1m m²) and Austria (+7.7% to 1.5m m²).

Partnerships should make it easier to launch new products

Unilin, LiCo and Scholz allow 14F to award mineral core sublicenses

New developments have emerged in the world of floor covering patents over the past few months. Businesses involved in products made with an entirely mineral core had moved closer together by entering into a sub-licensing arrangement.

Under the terms of this arrangement, 14F Licensing N.V. (Hamont, Belgium) can grant sub-licences for patents held by the consulting company Scholz & Partner (Hösbach, Germany) and Li&Co AG (Müstair, Switzerland) for hard floor covering with a mineral core. In spring 2016, Scholz & Partner and Li&Co had granted exclusive licensing rights for these patents to Flooring Industries Ltd. S.à.r.l, which is headquartered in Bertrange, Luxembourg, and owned by Unilin byba. This step has allowed Unilin Technologies, its intellectual property arm that has been based in Waregem, Belgium, since the beginning of 2020, to offer its licensees mineral core technology as an additional component of its patent portfolio.

Starting in summer 2021, Unilin Technologies and I4F had held talks about a sub-licensing arrangement, which allows I4F licensees to access mineral core patents held by Scholz & Partner and LiCo. These negotiations were concluded in mid-December. According to unconfirmed reports, similar talks are currently underway between Unilin Technologies and Välinge Innovation AB, headquartered in Viken, Sweden. If these talks are successful, Välinge Innovation licensees would have access to these patents, too. In all instances, licence fees will be distributed between the patent holders and the respective licensors according to a fixed scale.

By extending their licensing, the companies involved want to advance the dissemination of mineral core technology, which has been used on a rather small scale to date. Examples of materials used in mineral cores include gypsum fibreboard, fibre cement board, limestone or magnesia cement (MgO), on to which top layers of paper, cork, linoleum, corkment,

veneer or solid wood can be pressed. Newly developed products increasingly use digital printing on these surfaces, too. Mineral core products offer benefits including stability, water resistance and fire resistance. Their largely mineral structure has also become more important amidst growing discussions about PVC issues. One possible point of criticism is the relatively high weight of the individual elements.

A number of companies had launched the first mineral core flooring starting in 2005, but were unable to establish a foothold at first. This is especially true of the Ceraclic product line, which was developed in a partnership between four German companies: Witex International Flooring GmbH (Augustdorf), Tarkett Holding GmbH (Frankenthal), Resopal GmbH (Groß-Umstadt) and Knauf Integral KG (Satteldorf). Knauf later attempted to go it alone, but withdrew its Knauf One pro product line at the beginning of 2015. In 2017, LiCo started selling the Micodur product line, which was developed starting in 2015. Several other European flooring manufacturers are currently preparing to launch their own products. Leading suppliers on the international stage include the Shaw Industries subsidiary US Floors International LLC, based in Dalton, Georgia, which offers the Coretec Ceratouch product line, and Creative Flooring Solutions Holdings Ltd. (CFL), headquartered in Shanghai, which sells the Neptune Flooring product line.

A partnership agreement reached in mid-January 2022 between Unilin and Schiele Maschinenbau GmbH, based in Niederzissen, is expected to boost the distribution of the Unicoat waterproof laminate flooring technology. This process was developed by Unilin Technologies and has so far been used exclusively in Unilin products.



Flooring production at LiCo

(Photo credit: LiCo)

A total of seven liquid-laminate technology lines operating at Baruth site

Classen replaced a short-cycle press in an existing LLT-line in Baruth

In the third quarter of 2021, the Classen group of Kaisersesch, Germany, put a new short-cycle press into operation at the laminate-flooring works trading under the name of Classen Industries GmbH in Baruth.

The press, supplied by Wemhöner Surface Technologies GmbH & Co. KG of Herford, Germany, and designated "KT 7", has been integrated into an existing LLT production line. The short-cycle press that was used there and was also supplied by Wemhöner, has been dismantled and moved to another location at the site. This short-cycle press, being used as a replacement for an even older unit that was dismantled and scrapped, is used for producing "2-sheet" laminate-flooring. As such, Classen continues to use two short-cycle presses for this product version in which an overlay and a backer are pressed onto an HDF board laminated with decor paper.

The liquid-laminate technology (LLT) developed by Classen itself is used for the bulk of the laminate-flooring output at the Baruth site, however, whereby nonimpregnated decor paper is laminated onto the substrate board and followed by the application of a liquid coating. Laminate-flooring production in Baruth was switched to LLT technology in several steps starting in 2009. Classen Industries meanwhile operates a total of seven LLT production lines of different designs, with variations in structure and production stages. On four so-called "LLT light" lines, non-impregnated decor paper is laminated onto the substrate board by means of a roller-laminating station. The laminated boards are subsequently put into temporary storage for later processing. Either conventionally printed or single-colour decor paper is used for the lamination process. The print is applied to the boards laminated with single-colour decor paper on two separately standing single-pass digital printers, which have



Classen Industries site in Baruth

(Photo credit: Classen)

been running since mid-2013 and mid-2015.

After the period of temporary storage, the substrate boards laminated using the LLT light units are fed into three LLT stations in which coating and drying units for the liquid coating are combined with a downstream press. The pressing process is performed on a double-belt press in a unit that Classen calls "LLT 3". Short-cycle presses are used in the two other units, among them the KT 7 now set up as a replacement for the other press. In addition, Classen also operates two older LLT lines in Baruth, "LLT 1" and "LLT 2", which perform all the production stages one after the other from lamination and liquid-coating application through to pressing. In both cases, pressing takes place on a double-belt press.

As such, six roller-laminating stations, five lines of units for liquid-coating application and drying, two separately installed digital printers, three double-belt presses, and two short-cycle presses are in operation on the LLT lines of varying design in Baruth. The

laminating systems, the digital printers, the bulk of the coating and drying facilities, and the double-belt presses were all set up and installed by Hymmen GmbH Maschinen- und Anlagenbau, which makes the company the main plant supplier for the LLT technology operating at Classen. The two short-cycle presses used in the LLT lines as well as the two separate short-cycle presses for the production of the 2-sheet products were supplied by Wemhöner.

Following the replacement of the short-cycle press and the ensuing minor increase in capacity, Classen can apply decor paper to over 100m m² of HDF per year using LLT technology at the Baruth works. The downstream profiling units have an annual capacity of a little over 80m m². Classen currently operates a total of eleven profiling lines. Profiling and packing are still linked on two of these eleven units whereas the other nine lines are separated by buffer zones. Separation in the other two plants, which is possible in principal, would result in another slight increase in profiling capacity.

Laminate flooring plants in Wielsbeke, Vielsalm, Thomasville to be expanded

Mohawk to invest a further €215m in capacity expansions at three sites

In the coming two years, US flooring group Mohawk Industries Inc. (Calhoun, Georgia) intends to once again expand its laminate flooring plant in Thomasville, North Carolina, which has been in operation since mid-2005.

According to a statement issued on 29 September 2021, a further US\$87m or around €75m is to be invested in the location until the beginning of 2023. A comparable sum is also already tied up in a currently ongoing investment programme. Mohawk furthermore plans to invest approximately €130m until 2024 in the expansion of the laminate and design flooring plant in Wielsbeke (Belgium), which is assigned to the flooring division of Unilin byba. A new profiling line has been assembled at the MDF/HDF and laminate flooring plant in Vielsalm (Belgium), which has belonged to Unilin since the June 2015 acquisition of Spanolux div. Balterio N.V. (Sint-Baafs-Vijve, Belgium). The investment volume was estimated at around €11m when the project was announced in late summer 2020. Thus, the new investments planned for the three locations, which are primarily geared towards laminate flooring, have a total sum of around €215m. Together with the projects nearing completion in Thomasville, this results in a total investment sum of approximately €300m spread over the five-year period of 2019 to 2024.

Following the most recently completed projects at the two laminate flooring plants in Dzerzhinsk (Nizhny Novgorod, Russia) and Piên (Paraná, Brazil), no expansions are currently planned at either location, at least for the time being. In Dzerzhinsk, a new half-format short-cycle press was commissioned in the first half of 2018. The plant in Piên ensues from the joint venture Unilin Arauco Pisos Ltda., founded in April 2012 by Unilin and Arauco do Brasil S.A. (Curitiba, Paraná). On 1

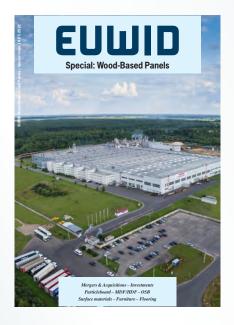
January 2021, Unilin took over the 50% stake held by the previous partner and thus now holds all shares in the company.

Unilin and Mohawk have repeatedly implemented projects in Wielsbeke and Thomasville during recent years. The total scope of these projects, however, was never as major as that of the plans that are now presented. During the second half of 2017, a new short-cycle press had also been installed in each of these plants, several months prior to the expansion of coating capacities in Dzerzhinsk. The contracts for the three presses were awarded as a package to Wemhöner Surface Technologies GmbH & Co. KG. Over the course of the last few months, Wemhöner has installed and commissioned an additional system in Thomasville. A new profiling line, supplied by Homag GmbH, has already been started up. The meanwhile presented next investments include the construction of a new production building, further expansion of production capacities and the expansion of storage capacities. In the area of production, another Wemhöner short-cycle press and a Homag profiling line will be among the machinery to be installed in the coming year. With these investments, Mohawk intends to increase its laminate flooring capacity in North America to 50-60m m² per annum, depending on the production programme. In order to secure the supply of upstream products for the Thomasville laminate flooring plant, the impregnation capacities at the location may also require expansion. Furthermore, there are preliminary plans to build a second MDF/HDF plant to meet the growing demand for HDF substrate boards from the Thomasville plant and the second, much smaller laminate flooring plant in Garner, North Carolina. To date, substrate boards have mostly been obtained from the Unilin US Inc. MDF/HDF plant in Mount Gilead, North Carolina, which is located some 80 km south of Thomasville; the remainder is purchased from other MDF/ HDF producers.

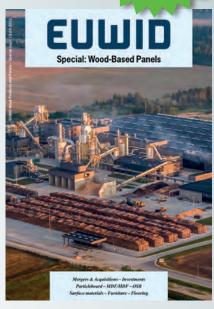
In Wielsbeke, Unilin intends to use the investments now planned to complete the separation of production activities in the flooring and decor divisions. Upon establishing its own laminating capacities in the Wielsbeke (Bospan) and Oostrozebeke (Spano) particleboard plants. which had previously only been geared towards production of raw particleboard, the short-cycle presses in the laminate flooring plant, previously used by both divisions, have now, for several years, been geared exclusively towards the laminating of HDF substrate boards. In the course of the coming months, Unilin also intends to relocate a cut-to-size saw for melamine-faced particleboard, as well as the edgebanding lines used mainly for producing shelves, from Wielsbeke to the Spano plant in Oostrozebeke. The area freed up by this relocation is to be used to expand the laminating and profiling capacities. As in Thomasville, a Wemhöner short-cycle press and a Homag profiling line are planned. Due to the preparatory work still required, assembly will likely not be able to commence until the second half of 2023; commissioning should then follow in the first quarter of 2024. The current investment programme also includes the construction of two high-bay warehouses, expansion of the shipping department and modernisation of the plant's infrastructure facilities. One of the high-bay warehouses is to be used for coated substrate boards. The second will be used to store finished products, including laminate flooring, design flooring and parquet. After completing these measures, Unilin will have a laminate flooring capacity of around 40-50m m² per annum in Wielsbeke. Production capacities in Vielsalm will remain at the current 20m m² per annum. Annual capacities of the Dzerzhinsk and Piên plants are stated at around 10m m² in each case.

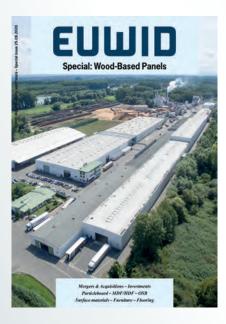
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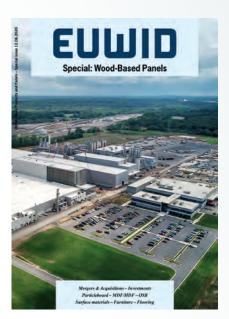


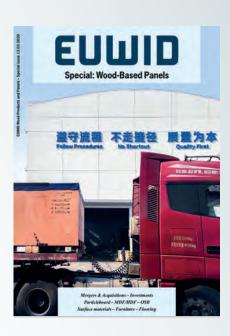


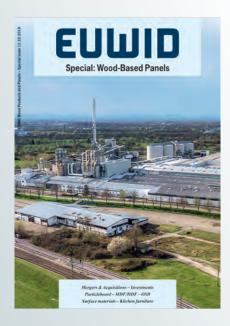












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