

bulletin

Magazine of the Siempelkamp Group

LIGNA

2019



Siempelkamp

ALLIGNA

2019

Intelligence in integrated wood processing

4

Integrated
plant concept:
Yes, we can!

8

Wood-based panel
production plant
with an IQ

28

Process = Progress:
Interviews with
Siempelkamp customers



Dear Readers,

I'm delighted to be able to present the first, new edition of the bulletin to you today. This special format is dedicated to our leading trade fair – the LIGNA. 'Intelligence in integrated wood processing' – that's the motto under which we'll be presenting everything that makes us special and that we want to make visible for the entire sector at the world's leading trade fair for the wood-processing industry.

Besides our overall skills where plants are concerned, this includes the intelligent and innovative technologies and solutions that we have developed on the basis of our most important driver: our customers' needs. These needs may encompass a desire to ramp up production, to manufacture a more varied range of board sizes or to operate our systems more flexibly and intuitively. But as varied as these wishes may be, there's one thing that always remains our priority – finding solutions to your requirements and needs. Why am I mentioning this? Because this focus on customers has been one of the most important aspects of Siempelkamp's value system for more than 135 years. So I am all the more pleased that, in addition to such innovations as our ContiRoll® 9 NEO, the intelligent digital plant and our Service 4.0, we're also going to be using this bulletin and our trade fair stand to share with you a range of benefits that our long-standing customers have enjoyed and experienced.

I've been the Siempelkamp Group's CEO since January 2019 and it's particularly important to me in this function to cultivate the values that have been lived over decades and to lead Siempelkamp into a future in which it remains true to its principles as a traditional machine manufacturer through and through. The future I see for us is as a family business that continues to expand and develop its technological lead – for and with our customers.

With this in mind, I hope you enjoy reading this issue and exploring our new Siempelkamp world at the LIGNA trade fair.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Michel', written in a cursive style.

Christoph Michel



Integrated plant concept: Yes, we can!

“Intelligence in integrated wood processing” that is the guiding principle of Siempelkamp’s representation at the LIGNA in May 2019. For the first time, Siempelkamp will exhibit the portfolio of the entire Group at one fair stand. Here, the whole is more than the sum of its parts.

Siempelkamp represents particular expertise in integrated plant engineering offering all the equipment necessary to turn wood into finished boards. In line with the guiding principle “Intelligence in integrated wood processing” the Group develops plants for the production of wood-based products in the form of systems solutions – ranging from R&D, D&E, manufacturing up to assembly and start-up. The entire value chain is represented. It all starts with the size-reduction technology and is completed by a reliable after-sales service. Our customers don’t just order machinery, but an intelligent, integrated plant concept for the production of wood-based products.

Pallmann and Strothmann at the LIGNA for the first time

Pallmann, a subsidiary fully incorporated since 2017, will be integrated into the optical representation of our stand. Pallmann stands for expertise in size-reduction technology, which is a decisive element during the early stages of engineered-wood production. Single-source provision of the entire size-reduction technology and optimization of the green- end machinery are the core competencies of Pallmann in Zweibrücken. Its portfolio also includes intelligent solutions for the size reduction and processing of waste wood, urban forest and annual plants.

Strothmann, another Siempelkamp subsidiary, is represented at LIGNA for the first time, offering effective solutions for automation and system integration widely appreciated in the markets. Strothmann RoundTrack®-Systems make an outstanding contribution to the intralogistics of plants for the production of wood-based materials.

Mat former systems, forming and press line, ContiRoll®: core competencies

The core of an integrated plant is the forming and press line. Forming line and press machinery play a decisive role in meeting all the technological requirements. Most flexible and reliable machinery is needed to deal with today’s demands on optimal forming characteristics and the manifold, versatile mechanical and physical properties of the final product. Following continuous R&D work, our engineers have developed excellent forming systems geared to the processing of chips and particles, fibers and strands. In combination with the ContiRoll® press, these state-of-the-art systems are technically and technologically advanced machine units. They are subject to continuous R&D work, to develop new kinds of wood-based products and enhance resource efficiency.

Talking about ContiRoll®: the press is the heart of a forming and press line and has made Siempelkamp the world market leader

in this field. In what is now the ninth generation, the ContiRoll® (see article on page 18) reflects the awareness that even a good product can still be improved. At LIGNA 2019 the ContiRoll® Generation 9 / 9 NEO will be an eye-catcher representing the comprehensive expertise of Siempelkamp Maschinen- und Anlagenbau.

Intelligently integrated: Yes, we can!

Bütter, the dryer and energy-plant specialist of our Group, demonstrates its prowess in plant engineering by providing intelligent networking concepts. In the field of process technology, dryers and energy plants go hand in hand. This is why engineered-wood producers – especially under the environmental aspect – tend to order integrated concepts for process heat generation and drying.

One of Büttner’s current orders includes the entire system for the treatment of combustion gases ex energy- and dryer plant of the new MDF factory at Swiss Krono in Barnwell, USA. The flue gas ex energy plant is purified through an efficient electrostatic precipitator. The purified flue gas is used as thermal energy in the downstream fibre dryer. The waste air ex fibre dryer is purified in various thermal post-combustion processes. This is to reduce the formaldehyde contents and VOC. Another system is included to reduce NOx.

CMC Texpan from Italy and Sicoplan from Belgium complement the Group’s portfolio in the field of front-end technology and engineering. Our Belgian experts illustrate at LIGNA 2019 the benefits of virtual-reality concepts within 3D planning for plant owners.

SLS, the Group’s service branch, demonstrates its outstanding performance around “Service 4.0” (see page 26).

Intelligent networking does not work without intelligent process control systems to ensure an intelligent use of the data collected from the plants. Siempelkamp has been focussing systematically on the digitalization and modelling of its plants and has thus created the basis for today’s utilization of the enormous potential contained in such data. That, too, is “Intelligence in integrated wood processing “.

Last but not least,

Siempelkamp’s finishing line scores high marks. Yet another subject at LIGNA 2019. Siempelkamp is the single-source supplier of all the components from the trimming station up to the fully automated board storage system. Since LIGNA 2017, the line has undergone quite a number of innovations. This applies to the 6-unit diagonal saw, which is optimally integrated into the control system. Developed to deal with maximum production speeds in continuous operation, it guarantees both the cut of even the shortest board as well as saw-blade changes during production any time. The finishing line concept is rounded off by extraction hoods, the aerodynamic behavior of which has been optimised. These hoods are to be found at the edge trimming units, the diagonal saws, the cooling turner with optimised pushers, the stacking station, the gripper carriages, the sanding line incl. loader, the cut-to-size system, the packaging line and the intralogistics system. Perfection to the last element – product enhancement in a short-cycle press plant!

Siempelkamp has established itself as a global systems supplier of integrated plants from the woodyard to the finished board. “The whole is more than the sum of its parts – this is what our presence at this year’s LIGNA stands for,” says Christoph Michel, CEO of the Siempelkamp Holding Company.

***VOC** = volatile organic compounds. These are gases and vapours of organic origin contained in the air e.g. hydrocarbon, alcohols, aldehydes and organic acids.

****NOx** are nitrogen monoxide (NO) and nitrogen dioxide (NO2); NOx-emissions develop during combustion of fossil fuels like coal or oil. In the multipollutant protocol of the UNECE Convention on Long-range Transboundary Air Pollution Germany has committed itself to further reduce its NOx emissions.

Think big: an integrated plant for Barnwell

In 2016, SWISS KRONO SC, LLC ordered an integrated plant for the production of MDF/HDF from Siempelkamp. As good as it could be! This project is in the focus of LIGNA 2019.

- Plant concept and 3D planning
- Woodyard with disc chipper, chip washer, refiner
- Dryer and energy plant (53 MW capacity)
- Screening technology
- Forming and press line including ContiRoll®
- Ecoresinator with special nozzle technology and hot steam
- Finishing line including cooling and stacking line, sanding station, cut-to-size saw and automated high-rack storage system



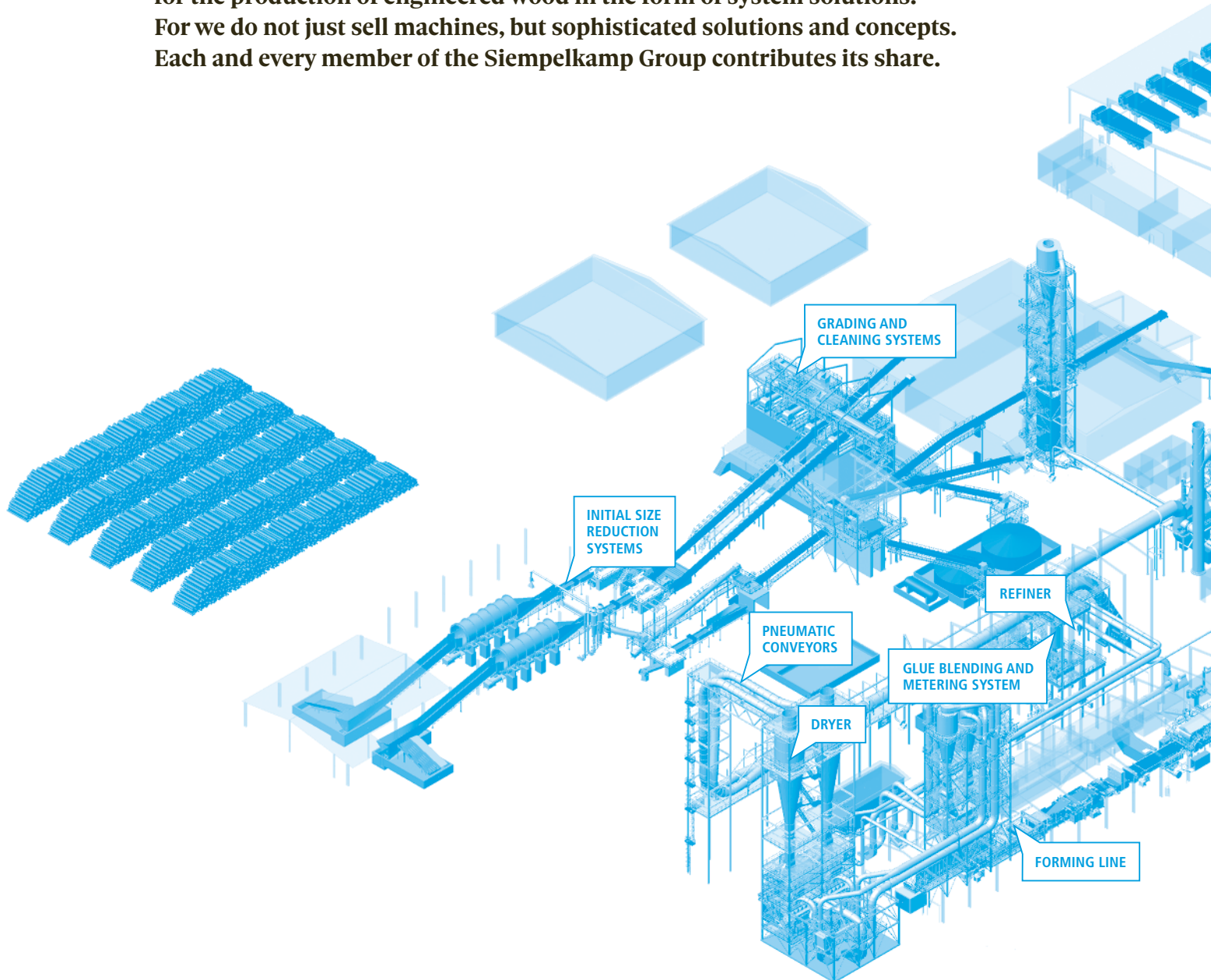
Fernando Oliveira
Group Technology Director
Sonae Arauco

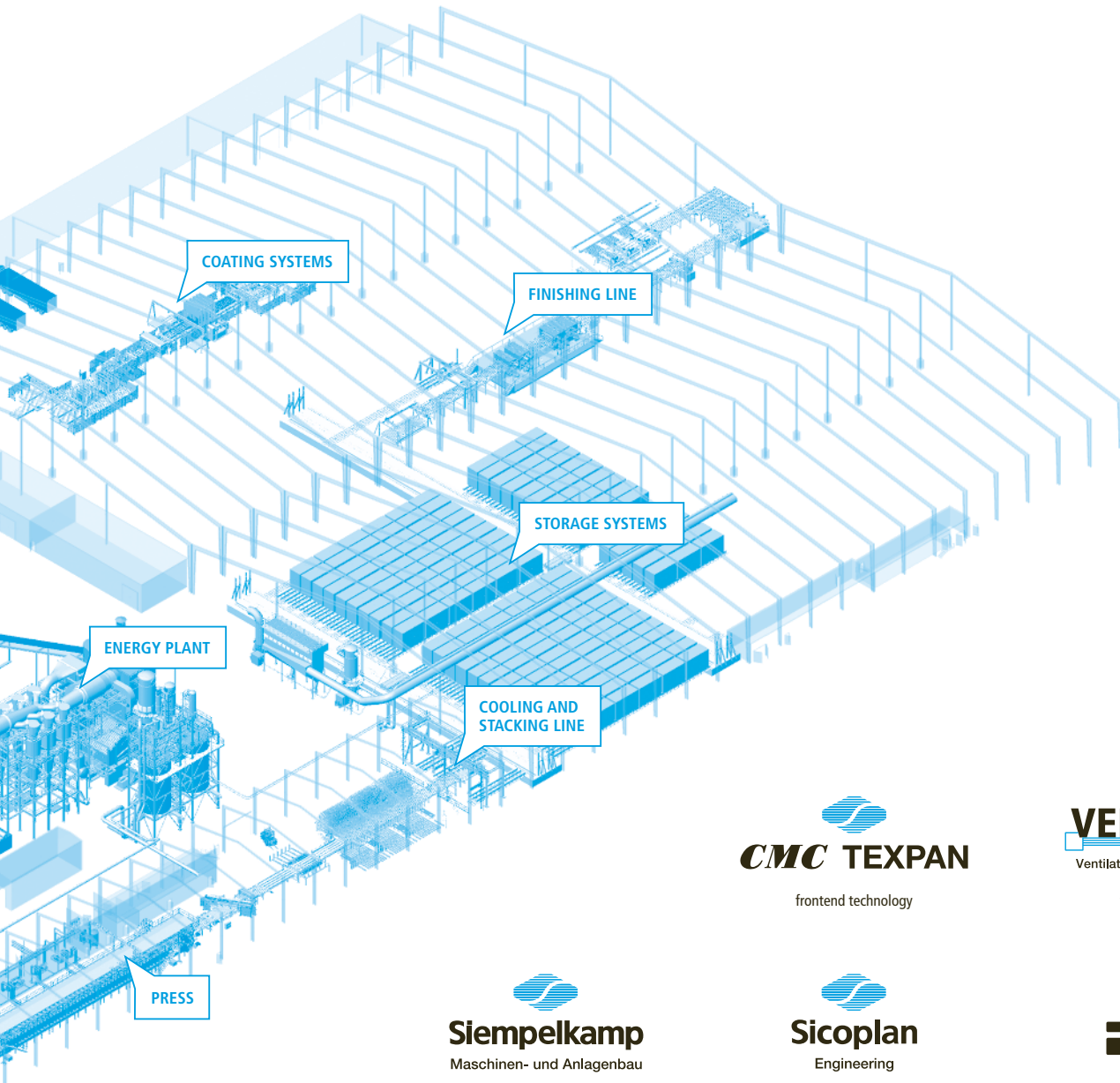


Siempelkamp stands for significant developments and innovations. Our production has been significantly influenced by at least one of such innovations over the past 4 to 5 years. Be it in the form of excellence and quality of our products or be it in the form of reduced production costs. We have noticed this in our order intake already – now it is reflected by our well-working production plants. We’re in the Champions League – of course we want to be first class and we want to win. Siempelkamp played a big part in the victory in the Champions League!

The Big Picture: integrated plants made by Siempelkamp

There is one obvious reason for the leading international producers of engineered wood to go for a Siempelkamp plant: following the guiding principle “Intelligence in integrated wood processing” we develop plants for the production of engineered wood in the form of system solutions. For we do not just sell machines, but sophisticated solutions and concepts. Each and every member of the Siempelkamp Group contributes its share.






CMC TEXPAN
 frontend technology


VENTAPP
 Ventilatoren – Apparatebau
 fan production


Siempelkamp
 Maschinen- und Anlagenbau
 forming and press line, finishing line, board handling


Sicoplan
 Engineering
 planning and engineering


Z&P
 switchgear technology


 size reduction technology


Siempelkamp
 Logistics & Service
 service, process control technology


hombak
 Maschinen- und Anlagenbau
 universal flaker


BÜTNER
 dryer, energy plant


Siempelkamp
 Maschinenfabrik
 manufacturing


STROTHMANN
 Machines & Handling
 RoundTrack®-Systems

Resource efficiency and environmental protection Siempelkamp's storyboard at a glance

LIGNA, a fair with global reach, puts resource efficiency and environmental protection on the agenda. Our storyboard exhibits important milestones.

$$\text{(RESOURCE) EFFICIENCY} = \frac{\text{BENEFIT}}{\text{OUTLAY}}$$

Resources are means for the production of services and goods. Resources can be divided into technical/ economic resources (personnel, operating equipment, capital, knowledge) and into natural resources. Natural resources are renewable and non-renewable primary raw materials, energy resources, air, water and soils. According to VDI 4800 Sheet 1 resource efficiency is defined as "the relationship between a specific benefit or result and the deployment of resources required to achieve this".*

*see www.resource-germany.com

**Wood-based materials:
Resource efficiency par excellence**

Wood-based materials are textbook examples of resource efficiency: the raw material for particleboards, for example, usually originates from sustainable forestry. In addition, the recycling of waste wood and urban forest as well as the use of thinning wood help save resources. Waste wood used for energy generation reduces the consumption of other fossil fuels.



Turning waste into resources: The rice straw plant

Siempelkamp's R&D focuses on the use of annual plants for the production of fiberboard. In 2017, this tipped the scales in favor of a large order from the USA. CalAg LLC ordered a plant for the production of fiberboard made of rice straw – an adequate use of a natural raw material abundantly available in California. As the environmental laws are very strict in California, prohibiting the use of formaldehyde, we designed a glue blending system using a turbo mixer.



Bamboo for particleboard: It works!

Siempelkamp started intensive lab tests using bamboo for board production as early as in 1993. The engagement was intensified in 2009, when it launched a number of test series on the production of MDF, OSB and particleboard. Together with Artison Agrotech Pvt., Siempelkamp initiated a project promoting the use of bamboo for particleboards.



Wood and more: More and more options

Rice straw, bamboo and more: flax, reed and bagasse (sugar cane) can be used for particleboard production, as has been confirmed by various test projects carried out at our R&D Center. We have already successfully realized some projects using flax and sugar cane for production in e.g. China and Egypt.





Global warming and environmental technology: Serve for Büttner!

There is hardly any wood-processing plant in the world that is permitted to operate without waste air treatment systems. Almost everywhere a reliable environmental technology is mandatory. Compliance with the statutory limits for emissions is being tightened everywhere. Siempelkamp's subsidiary Büttner supplies integrated systems, which meet all these requirements. Büttner energy plants contain modern electrostatic precipitators: they serve to separate the dust from the flue gas thus ensuring that only very small amounts of ash can get onto the product. NOx emissions are presently in the focus in the automotive industry. Büttner offers suitable systems for reducing the NOx significantly.

Büttner dryers: Environmental technology II

Büttner dryers also comply with the environmental laws. Today, almost each of them incorporates a WESP (wet electrostatic precipitator) for dust separation. Biological filters are used for reducing the formaldehyde emissions. In North America, Büttner has supplied a number of dryers, the waste air of which is cleaned in different waste-air treatment plants. The specific demands at the place of installation always determine the kind and scope of supply of Büttner's environmental technology. Energy plant, dryer and, last but not least, the burner technology developed by Büttner are customized to suit our customers' needs.

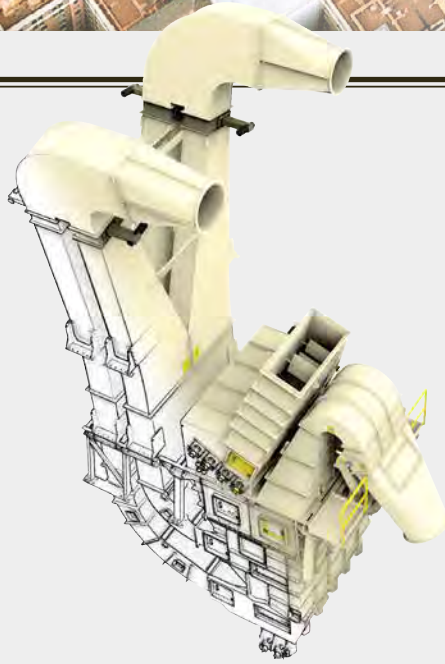
www.buettner-energy-dryer.com



3 x „E“ equals energy efficiency!

Whether or not a production process complies with ecological standards is increasingly important in modern wood-processing industries. Energy efficiency is even developing into a strategic factor. Our three Eco-systems: Ecodrive, EcoFormer and Ecoresinator ensure high-quality, cost-effective and energy-efficient production.

The energy-efficient ContiRoll Ecodrive is able to realize energy savings of at least 7 % during full-load operation and up to 14 % during partial-load operation. The EcoFormer SL for particleboard production has achieved an unprecedented forming accuracy with the energy consumption reduced to a minimum. The Ecoresinator stands for a precise metering and distribution of the glue. Owing to the special nozzle technology and the use of hot steam our customers are able to save up to 15 % of solid resin compared to our traditional blowline blender.



Anything else but hot air: Eco No. 4, the EcoSifter

Fan construction and apparatus engineering provided by Ventapp form an important part of the overall Siempelkamp concept. The EcoSifter, which was Siempelkamp's first fibre separator, was developed in close cooperation between this subsidiary and the flow specialists at Siempelkamp NIS. The interdisciplinary team developed and manufactured a fibre sifter unprecedented in 2018. The benefits included substantial savings potentials, improved sifting results and significantly higher material throughputs.

Siempelkamp size-reduction technology: first division of resource efficiency

A perfectly functioning technology is necessary to turn waste into precious raw material. Customized material preparation and sophisticated logistics concepts are required, all adding up to the size-reduction technology by Siempelkamp. "Economic shredders turn waste and residues into valuable new raw material resources, and reduce pollutants thus saving natural resources – that is our aspiration". The company has also specialized in efficient recycling machines e.g. in the fields of wood and waste paper, plastics and flooring.



The self-optimizing plant – a real saver!

Resin, energy, ... Siempelkamp's concept of a self-optimizing plant helps save material. The intelligent use of the data, which can be easily collected from the entire production process from the woodyard to the saw, achieves material savings of up to 2.5 % today.

„The wood-based panel production plant with an IQ“, p.22 >

**Intelligence in integrated wood processing:
not without resource efficiency!**

Wood-based products are especially environmentally friendly and sustainable materials. At the same time, they substitute those materials, the production of which would require far more energy. Besides, wood has caused the visions of future applications to diversify. “Surface”, “process optimization” and “raw material trends” are important challenges faced, and responded to, by Siempelkamp.



SICOPLAN'S NEW 3D TOOL FOR PLANNING AND ENGINEERING



BLOCK BUSTER

WITH PRECISION EFFECT

by Dirk Traen / Frank Andries

Virtual factories have already established themselves as tools that offer great benefits for planning plants destined for use in the production of wood-based materials. CAD data that are rendered in real time and that may be accessed over the Internet make them come alive. Such virtual design concepts are one of the core skills at Sicoplan, Siempelkamp's subsidiary in Belgium, whose planning and engineering specialists have started to use the new 3D tool to achieve blockbusting results right in line with Siempelkamp's motto for the LIGNA 2019 trade fair: 'Intelligence in integrated wood processing'.

The engineering specialists at Sicoplan provide the pre-engineering, planning and start-up services that the Siempelkamp Group offers. Sicoplan's particular strength lies in the precise 3D design concepts that it develops for modernisations / retrofits, extensions and conversions, for example, which it visualises on the basis of 3D scans that bring together the new machines and the existing equipment into which they are to be integrated. The local conditions at the future plant owner's site will be precisely scanned and documented. The results are then converted into 3D models that provide even more realistic impressions of the overall concept for the plant and – even more importantly – make planning even more precise.

The team from Belgium will be presenting a 3D visualisation system that is significantly more refined at the LIGNA 2019. It is in fact so refined that its visualisation features, which are better than ever before, will allow plant owners and planning experts to tour their virtual plants. Just a gimmick? No. Because virtual reality delivers clear benefits: the engineering in existing plants may be implemented more precisely with the help of 3D scans because they make it possible to determine collisions and defects during the early stages of design. Scans are also much more precise, comprehensive and faster than traditional methods of taking measurements. >



Ready for takeoff: the Sicoplan Team at work on the 3D scan



Dirk Traen
Sicoplan Manager

Sicoplan has always seen itself as a pioneer in the development of innovative engineering tools for machinery and plant construction. Such tools include the progression from 2D to 3D, computer-generated files for elaborating on workshop drawings and the integration of point clouds into 3D models. Sicoplan is, for example, currently also exploring the implementation of VR technology in machinery and engineering. Its pursuit of such innovations that is also being helped along with continuous development of its personnel's skills and trips to trade fairs is aimed at keeping the company one step ahead of the competition in the wood-based materials industry.

What are the advantages of the new 3D model?

The tool for visualising 3D plant models has been significantly improved. As an integrated communications platform, it now involves all the partners concerned with a project in the best way possible. The tool is able to access historical records and cross references contained in a variety of file formats that include drawings, photographs and emails to enable ‘issue tracking’ (please see box). It is able to process all file types containing 3D information, even point clouds from 3D laser scans and photographs taken by drones.

It is also possible to represent the resulting 3D models as ‘virtual reality’ that produces a far more realistic view and equally realistic navigation directly in the 3D model ... which also allows proportions and possible collisions to be depicted with greater precision as users are taken on their tours through their new plants.

What are the demands that the new tool makes on IT infrastructure?

The new tool may be used with desktop PCs equipped with high-performance graphics cards or laptops possessing Thunderbolt-3 interfaces to external graphics cards. Sicoplan is able to provide the software licences for the duration of the project. The project will be concluded with the provision of a comprehensive set of documents supplied in an external file. The VR headset for experiencing virtual reality is not essential to the use of the project tool and is an optional add-on.

How is the sensitive data protected?

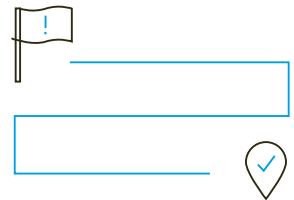
Data are saved in a cloud. The customer will be provided with a confidentiality agreement along with the software.

When can customers wishing to utilise the virtual plant obtain the new 3D tool from Sicoplan?

Go-live is scheduled for the end of 2019 but visitors to the LIGNA 2019 in Hanover will be able to preview the system.

**Issue Tracking:
troubleshooting,
securing smooth
operation**

Issue-tracking systems are software solutions that are employed throughout the many different stages of order processing. They are essential to the smooth processing of orders as, among other things, they facilitate troubleshooting, the tracking of responsibilities, the monitoring of the time taken to process orders and the quality of these processes, the securing of work-flow processes and the initiation of statistical analyses.



Sicoplan teamwork: Frank Andries (left), Dirk Traen (centre), Lode Berteloot (right) in Lauwe in Belgium



Live impression of a wood-based materials plant – realistic and precise





Siempelkamp in touch with tomorrow

ContiRoll® Generation 9 and ContiRoll® Generation 9 NEO

The ContiRoll® is seen as the benchmark for continuous wood-based materials production: annual capacities of up to 900,000 square metres and more, great reliability and high product quality are key factors in its success on the market.

That's why the ContiRoll® Generation 9 and ContiRoll® Generation 9 NEO are also going to be important topics at the LIGNA 2019.



Discover our ContiRoll® Generation 9 NEO either in Virtual Reality as an interactive 3D model or in Augmented Reality.



For the first time in its history, the ContiRoll® is now available in two versions for different applications. The ContiRoll® Generation 9 NEO was developed as a second type to accompany the tried-and-tested previous design with flexible infeed end that was introduced with the sixth generation. NEO stands for New Entry Option, which has a particularly flexible doubled infeed booster hot-platen length. It's responsible for reliably increasing production speeds by up to 30%. The potential for greater energy inputs at the start of the pressing process guarantees significantly lower curing factors and higher ContiRoll® outputs.

The Ecodrive has already demonstrated its benefits in the ninth generation of the ContiRoll®. The Ecodrive system utilises a synchronous motor technology that features improved speed consistency that is considerably more energy-efficient than with previous designs and is very easy to maintain. The servomotor used in the ContiRoll Ecodrive creates the potential for plant operators to achieve savings of up to 14% over conventional systems. One important feature that the system offers is the constantly high torque of 2,500 millimetres per second across the entire range of production speeds. The Ecodrive system is also available for retrofitting, which does not require any major conversion work.



ContiRoll Ecodrive

Checking the hot platens in production



HPC-40 – the power chain not only for high-speed production

Both the market and manufacturers are demanding ever larger and more efficient press systems that achieve faster production speeds so that they are able to meet the growing demand for wood-based boards and cut their manufacturing costs. More demanding press operations in conjunction with significantly faster production speeds expose the chain systems to greater thermal and mechanical loads. These chain systems are integral to the design of the press and are responsible for guaranteeing reliable tracking of the press belt over the long term. The newly developed HPC40 (High Performance Chain) generation of chains satisfies all the new demands and consequently also extends the lifespans of the overall systems. The continuous monitoring of the system with the help of sensors also plays an important role here.

Ultra-thin boards, thick boards, light boards – sticking to dimensions

The ContiRoll® Generation 9 uses a hydraulics system that has been coordinated with the production spectrum that plant operators require. This system may be configured to meet the special demands that the production of thin / ultra-thin and light board production. Thickness feedback in conjunction with the hydraulic system is particularly important during the production of unsanded panels that vary in thickness and is equally important to minimize the required sanding.

That's why Siempelkamp has continued to perfect the system employed by the ContiRoll® Generation 9 to measure thicknesses. The solution for a method of measuring thicknesses that isn't affected by anything else that is going on with the plant has been realised with the help of a separate design. A structurally stable, independent measuring frame serves as a reference point for dimensions that is sound as it has been removed from the effects of all thermal and structural factors that might impair the quality of the measurements.

In combination with the thickness measurement system of the raw boards downstream of the ContiRoll®, this approach constitutes a closed-loop control concept – the 'Ecopilot 2.0'.

ContiRoll® 9: a successful system continuously developed over three decades

The ninth-generation ContiRoll® is the result of 30 years of Siempelkamp consistently working on developing its press technologies – with more than 320 units sold and in operation. And still, after all this time, details continue to be implemented that are delivering significant benefits to the system's operational safety and ease of maintenance. These details include the latest innovations for hot-platen feeds, systems for cleaning fumes from the press and strand discharge, which have led to new solution approaches, particularly in the production of OSB.

30

years of development

> 320

units sold

20×

„Yes, we want to place an order“ for ContiRoll® Gen 9



ContiRoll® Generation 9 NEO: Berneck places first order!


Berneck S.A. Painéis e Serrados in Brazil placed an order for its fifth production line from Siempelkamp in 2018. It included the ContiRoll® Generation 9 NEO.

Berneck, which was originally founded as a sawmill in Bituruna in Paraná state in 1952, is now one of the largest manufacturers in South America. It mainly processes wood from pine trees that are cultivated on the 63,000 hectares of its own sustainable plantation. Berneck has been relying on Siempelkamp's experience in engineering developed for the production of wood-based boards for 18 years.

Berneck's new production site in Lages will output an additional 1,700 cubic metres of MDF every day from the time it goes into production, which is planned for spring 2021. Siempelkamp's control technology is also to be implemented here: as part of Berneck's digitalisation strategy, its management did not only choose to use the Prod-IQ® system in the new plant, but to also retrofit its four existing lines with it. The scope of performance will also include online quality monitoring using the Prod-IQ.quality (SPOC) system in addition to interfaces to SAP for the press and sanding line.



Gilson Berneck, President Berneck S.A., Werner Masnitza, Sales Director South America Siempelkamp and Daniel Berneck, Industrial Director Berneck S.A. (from right to left)

An abstract graphic consisting of numerous thin, curved lines in various colors (red, orange, yellow, green, blue, purple) that converge from the top and bottom edges towards a central point, creating a funnel or hourglass shape. The lines are set against a dark background.

Big data in a nutshell: The wood-based panel production plant **with an IQ**

Big data, Industry 4.0, Digital Factory – terms created in the age of computer sciences are also being actively discussed in the wood-based materials industry. The central question: how can the volumes of data recorded and measured at plants be utilised?

by Gregor Bernardy

Siempelkamp's competence and expertise in the field of integrated plants is considered to be a market asset: a successful, integrated technical concept can only be launched by those who understand the entire value chain of a production process. Starting with the project work of a plant, the log processing equipment, the forming and press line up to the handling systems – Siempelkamp is already able to provide all these products and services from within its own value chain.

To accomplish these complex tasks, Siempelkamp relies on intelligent systems ranging from the adaptive, self-learning production control, mechatronic system components up to machine monitoring and predictive maintenance. The convincing benefits for the customer: top quality and lower production costs.



Big data: what is it?

Big data are huge data volumes that are generated in many different areas, e.g. internet, social media, transportation and industry to name but a few. These data volumes grow excessively fast so that big data today also comprises IT solutions and systems that enable companies to process the information that has been collected.

The fire and police services use big-data analyses to monitor and control the response to emergency call-outs; public transport companies do the same with respect to planning the deployment of staff and transportation systems; enterprises use it to manage their relationships with customers (CRM).

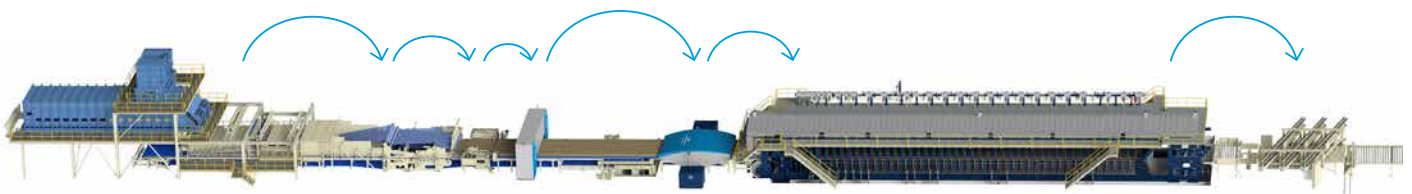
Digitalisation and modelling of a wood-based materials production plant

The actual task of the wood-based materials industry is to systematically obtain information from the data volume, to determine characteristic values and to make these available to decision-makers on mobile devices. It is also a matter of networking the plant, simulating the production process and controlling it autonomously in the best way possible. Plant suppliers who are able to master the entire system while also supplying digitalisation from a single source are able to create a competitive lead for themselves. For decades, Siempelkamp has been focussing systematically on the digitalisation and modelling of its plants and has thus created the basis for today's utilisation of the enormous potential contained in such data.

So, what is the status quo of the intelligent process control technology used in wood-based materials production? Has the self-optimising production plant for wood-based materials become a reality?

These days the highly efficient production of particle-board, fibreboard and OSB on modern plants is achieved as follows: a production order is planned in the ERP system (e.g. SAP) and sent to the plant – keyword “vertical integration”. The plant owner defines the type, the number and the properties of the product to be produced. The subsequent process from changes to production orders, online quality checks up to further production order changes in exact accordance with the required numbers continues fully automatically – keyword “horizontal integration”.

Siempelkamp's approach goes even further: over the course of production, the plant automatically and independently selects those production settings that ensure cost-optimised production. That means reducing material and energy consumption while at the same time increasing production speeds in the best way possible. >



Wood-based panel production plant - networked, intelligent, self-optimising



prodIQ

Our innovative process control system

Siempelkamp has developed Prod-IQ® for the comprehensive analysis and optimisation of its plants. This innovative process control system consists of five modules that handle the tasks of production-data management and quality control, maintenance and repair and linking to an ERP system.

.basics

contains basic modules for the creation of reliable and up-to-date management KPIs (availability, plant output, consumption, quality) as well as for process documentation (MFT = material flow tracking).



.business

for customising reports, including the Script-editor.

.maintenance

predictive and on-condition support of maintenance and repair.

.quality

online-quality prediction of physical properties e.g. IB, MOR and thickness swell.

.profile

supplements the online-predictions by raw-density profiles on the basis of physical simulation of the mat behaviour in the press (powered by VHP).



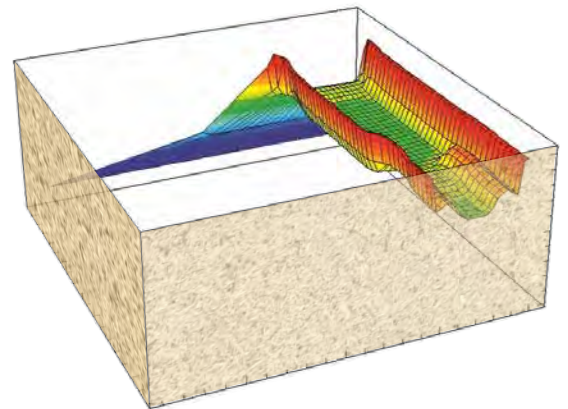
Next

goes one step further and stands for the perfect interaction of all Siempelkamp's developments towards a self-optimising plant. The concept integrates the ERP link, the recipe manager, the automatic production order change, the online quality prediction and check, the optimised control circuits, the intelligent measurement technology, including condition monitoring for the ContiRoll® up to performance monitoring for the machines. Production planning by the customer – autonomous execution of the plan by the plant, which is monitored online, reliable, fully automated, cost efficient and on schedule.

Intelligence in integrated wood processing

The concept has developed into a self-learning system linked to the lab gauges using each and every lab result for the automatic adaptation of the model. This is why IB, MOR and thickness swell can be calculated online at an average precision of 95 % at the time the board leaves the press, which is much sooner than a sample could be measured in the lab. It's possible to compute the average raw board density to a precision of at least 99 %, which is more exact than would be possible with an inline board scale. This intelligent use of the data, which may easily be collected throughout the entire production process – from wood-yard to saw – today results in material savings of up to 2.5 %.

Mat density profile



Big data, big picture: the digital twin

Intelligent networking only works as an integrated concept. The digital twin plays a key role here. Three-dimensional design drawings developed on the basis of multidisciplinary teamwork (mechanical, hydraulic, technological, electrical departments) are converted into authentic 3D-machine simulations. Modern simulation systems create an animated image, exhibiting the actual functions of machinery and plants. This digital twin serves to simulate processes as early as during the project stage. Digital twin is also used for software office tests, for virtual, real-time start-ups using the actual control systems even before the actual start-up of the physical machinery has taken place. Clear advantage for the plant operator: a significantly wider range of information is available during the negotiating stage and significantly shorter subsequent start-up times.

Conclusion: all the factors that are decisive to the end product are constantly communicating and interacting in a self-optimising plant. It's possible to make everything transparent and develop a digital memory that encompasses the entire value chain for the product.

Good, better, Service 4.0

Intelligent modernization and retrofit packages

An important subject at LIGNA: How can existing plants be retrofitted to the state of the art in order to produce economically while meeting the highest demands on quality – reliably, automatically, cost-effectively and on schedule? Siempelkamp Logistics & Service GmbH's modernization and retrofitting packages specifically target at optimizing a plant with a long-term effect.

by Dr. Stephan Niggeschmidt

SicoScan

For the precise measurement of different production parameters such as mat moisture content, weight per unit area, or board thickness. SicoScan is integrated into the automation technology and communicates directly with the control systems.

- + Continuous optimization of the production process
- + Higher profitability
- + Increased plant uptime

EcoScan NEO

Allows precise analysis of the weight-per-unit-area distribution and reliable tramp material detection. Offers a clear multi-dimensional visualization system able to localize forming errors and tramp material in the mat, to detect mat sections having incorrect densities caused by process deficiencies and to detect tramp material as small as 1.6 mm.

- + Detection of even the smallest density deviations
- + Reduced raw material consumption
- + Best board quality

SicoCam

Is designed to measure the quality and to control fully automatically the wood-based board production process. This fully automatic measuring system scans each board edge in the inline-board measurement process. The measurement data (width, length and diagonal dimensions) are processed and can be evaluated directly.

- + Material and resource savings
- + Highly precise board production

Prod-IQ®

Modular manufacturing execution system (MES) having the following functions:

- Automatic downtime control and uptime analysis
- Management of the production data incl. computation of the key performance indicators e.g. for output, consumption, quality and costs.
- Documentation of the board production by material flow tracking
- Online quality check (SPOC) with respect to physical properties and raw density profile
- Process-data based maintenance
- Link to ERP-systems e.g. SAP

Sico CMS

Efficient maintenance management, machine condition monitoring, and preventive maintenance, especially for the important ContiRoll® components such as EcoDrive (drives and gearboxes), hydraulics, chains, supporting rollers, friction linings, insulations, and steel belts.

- + Clear visualization
- + Compatible with any sensor technology, excellently suitable as a retrofit
- + Can be configured specifically to suit individual requirements and is open-ended to meet future tasks

Sico SPC 9

Intelligent pressure and position control system for the control of the desired pressing forces and press gaps in the technological press zones of the ContiRoll®. The system ensures that the pressing forces or press gaps requested by the technologist are precisely maintained.

- + Latest hardware technology
- + Phenomenal processing power
- + Problem-free upgrading of first- and second-generation SPC systems

ContiRoll EcoDrive

Reliable drive technology with high savings potential. ContiRoll EcoDrive is an energy-efficient servomotor with a two-stage gearbox and integrated water cooler which has an increased service life and dependability several times higher than that of conventional drive concepts that employ complex gearbox geometries.

- + Best efficiency with energy savings of up to 14 % (partial-load operation)
- + Wear is insignificant due to low r.p.m., very low risk of failure
- + Conversion does not require complex modifications
- + Quick ROI

- + Online availability of all consumption and performance figures to enable performance analysis
- + Reproducible product quality
- + Increased productivity i. a. by higher plant speeds, reduced rejects and material savings while maintaining the quality
- + Increased uptime by systematic downtime analysis and preventive maintenance

EcoFormer

To optimize mat forming. The EcoFormer is a crucial component when it comes to improving the forming accuracy of surface-layer mat formers in particleboard plants.

- + Improved forming in longitudinal and transversal directions
- + Reduced production costs due to an optimized consumption of resources (wood, resin, electrical and thermal energy)

Ecoresinator

Glue blending and metering system for MDF production, which reduces glue consumption rendering production more profitable.

- + High material savings
- + Low operational costs
- + Technological flexibility

Siempelkamp Logistics & Service GmbH:

We are shaping the future – Service 4.0

Markets and technologies are in a state of upheaval, the digital transformation is transforming processes. Consequently, the demands on developers and service providers in the engineered-wood industry are constantly changing. Siempelkamp Logistics & Service GmbH (SLS) responds to this with a clear concept.

by Dr. Stephan Niggeschmidt



SLS' commitment to service

You request. We deliver.

Service support for more than 1000 plants throughout the world, three locations, one commitment to service: The SLS is the service specialist of the Siempelkamp Group. Its core business is the after-sales service for Siempelkamp machines

and plants throughout the world. This includes the planning and realisation of maintenance, retrofitting and modernisation projects as well as the provision of spare parts, field service, support or process automation.

Digital transformation of the markets and technologies requires innovative solutions, smooth processes, intelligent logistics, motivated and highly-skilled employees as well as an above-average idea of what good service should look like. SLS' response to the challenges: Service 4.0. With this new concept, SLS has created the basis for innovations, which result in optimized production, higher efficiency and less costs.

SLS clearly aims at making the most of our plants, focusing systematically on Smart Services. Our concept: Service 4.0 – a broad approach using innovative, technological products, the digitalization of sales channels as well as networking of internal and external processes. SLS thus generates significant added values for its customers: optimised processes, increased efficiency, reduced operating costs and, above all, guaranteed long-term viability of the plant. At the same time, SLS implements every aspect of Siempelkamp's motto at this year's LIGNA: "Intelligence in integrated wood processing". There are three examples of Service 4.0: 24/7 remote service by SLS, its latest service platform and the intelligent control system Prod-IQ®.

24/7 remote service: quick and secure – for maximum uptime of your plant

When a plant is down, when production is disrupted, or whenever it is intended to be optimized, reliable service is required. And this is where the 24/7 remote service by SLS comes in – a system specially developed for the high demands placed on remote maintenance systems in an industrial environment. This remote system enables to analyse the plant status economically and directly. The principle: When the plant owner has provided access, the plant is connected via internet through a service router to a central remote server at Siempelkamp. Up-to-date access mechanisms e.g. protocols via SSH, IPsec and SSL/TLS, cryptographic encoding and a password-protected authentication procedures ensure utmost security. During the remote maintenance session, plant owners are at all times able to track all activities. In addition, the entire field job will be documented automatically, and above all, audit-proof. On the whole, 24/7 remote service ensures higher uptimes, reduced costs and less maintenance.

Service platform "Siempelkamp e-Lifecycle Services": smart interfaces between customer and SLS

The Service 4.0 strategy of SLS incorporates another development by the service specialist: A service platform, which represents the centralised service interface for the plant operator over the entire life cycle of the plant. This platform provides customized scalable applications that automate processes rendering them significantly more efficient. This includes, amongst other things, a spare parts catalogue that incorporates the latest documentation on plant and spare parts, information on delivery times of spare parts or identification of components, note lists, etc.

Prod-IQ®: Improved efficiency by an intelligent control system

The name says it all: Prod-IQ® for an intelligent and systematically increasable production. In close collaboration with the engineered-wood industry, the software provides reliable figures for production management, quality management, maintenance and repair. The features of the modular system include e.g. automatic downtime control and uptime analysis, management of the production data incl. computation of several key performance indicators, documentation of product development by material flow tracking, online quality check (SPOC) of physical properties and raw density profile or maintenance basing on process data. Moreover, Prod-IQ® can also be linked to the customer's ERP. This implies an exchange of order data. The plant data concerning performance, uptimes and consumption are therefore up to date at all times. A comprehensive performance analysis is available to the plant owner. The advantages: More transparent costs, less resources, longer uptime. Prod-IQ® thus supports our position in the market and provides additional options for future investments. In addition to the upgrades of existing systems, SLS offers Prod-IQ®-modules as retrofitting or modernisation packages for plants provided by Siempelkamp and its competitors (see page 25).

The structuring of processes is also progress: Interviews with Siempelkamp customers

Process, Latin for procedure, stands for 'to advance', 'to go ahead'. Leading global producers of wood-based materials have always relied on Siempelkamp's technologies and its teams to broaden their pioneering roles in the market. Siempelkamp customers discuss the processes created with Siempelkamp, their values, visions and successes in an interview with bulletin.



Interview

1



Mehmet Semih Söylemez: visionary, businessman, author

AGT production location in Antalya: exact-fitting installation of a new dryer cyclone, supplied by the Siempelkamp subsidiary Büttner

“For those who want innovation”

Regardless of whether as a businessman, visionary, or author: Mehmet Semih Söylemez is an exciting interview partner from many perspectives. In an interview with bulletin the board member talks about AGT, the leading Turkish wood-based materials company, about values, the cooperation with Siempelkamp, innovations, and future prospects.

Interview at AGT in Antalya: Mehmet Semih Söylemez
(Member of the Board AGT Ağaç San. ve Tic. A.Ş.),
Nilgün Binbay (Sales Assistant Wood Division, Siempelkamp),
Ulrich Kaiser (Head of Sales, Siempelkamp)

bulletin: Mr. Söylemez, AGT and Siempelkamp have been working together for many years. What is in your opinion the biggest benefit of this cooperation or of owning a Siempelkamp plant?

Mehmet Semih Söylemez: As you know, our main raw material is wood for the production of MDF and HDF. We mainly make use of the minor quality wood from local forestry and convert this to high quality MDF or HDF boards. Our import rate of foreign chips is at a minimum these days. The raw boards produced on the Siempelkamp press line are further processed in our factory and are exported as finished products to 70 different countries. Our production lines are designed with state-of-the-art environmental protection equipment, so that we are proud of being an environmentally friendly company. Any heat demand for our processes is generated from waste material from debarking, screening and finally sanding or profiling dust from the production process, allowing us to use the wood to nearly 100%. Considering that we contribute to the development of our forests in Turkey, both companies, AGT and Siempelkamp, create a lot of added value at the same time.

bulletin: How have the markets of your company developed? Have you determined distinctive changes or are there constants?

Mehmet Semih Söylemez: Let's start with the constants of our company, which is definitely to export 50% of our goods – this corresponds to a rate of about 10 to 15% in the wood-based panel industry in Turkey. This fact distinguishes AGT from other companies in the Turkish market.

AGT at a glance

- Founded in 1984 in Antalya
- One of the largest producers of PVC-coated MDF/HDF boards for the furniture industry
- Production range also includes: flooring, wall panels, and doors
- Distribution points in 70 countries
- More than 900 employees
- Vision: "To become a worldwide brand that shapes wood with passion and technology."



We started to export our products in 2000 and we are very glad we did. When starting our business we primarily imported the raw boards from abroad and concentrated on the added-value processes. After starting our own MDF/HDF production in 2013 we could mainly use local wood resources. With the high quality of the MDF/HDF boards produced on the Siempelkamp ContiRoll® line and the in-house added-value processes, we could further raise our export volume and all parties involved profit, including our country. The regions we export can change, but export itself is in fact our constant.

In our region we are used to periodically facing economic crises and that's why you can see that export is security to our company. The reason why we could make a new investment in a second Siempelkamp MDF ContiRoll® line is related to our strength and strategy to export. If you invest in Euro the income shall be in Euro as well.

AGT's slogan is "yenilik isteyene" which means "for those who want innovation" and we have to stand behind this spirit. We have been at different international fairs such as the Domotex or Intermob. The first question asked by the visitors is "what's new?". As we've committed ourselves to novelty, being creative is always our mission. For example, the production of flooring: Defne Koz, a designer living in the USA, designed a new series of flooring lamination for us. She imagined how nature would look in a world with extraterrestrial life. This excited us as something like this does not exist.

Of course, these will not be high selling products but we do this as an innovation and we have to keep this spirit. But to keep this perspective, there is one condition which I want to express by quoting Michelangelo at the age of 80: "I am still learning".

And when we practice this attitude the company stays innovative with all our employees starting with the general manager, directors and managers throughout all departments.

bulletin: "AGT values people", is one aspect of your corporate values. How exactly is this implemented?

Mehmet Semih Söylemez: You get this culture from your family first hand. My mother and father always behaved like this. In addition, I was always interested in psychology. One fact we need to accept is that companies are managed by people, by people's emotions. If you don't appeal to them, why should those people do anything?

There is a saying that I never agreed with: "Never reflect your personal problems in your business life". Instead of this, actually it would help asking: "How can I support you in finding a solution?" and it is not difficult to ask this question. Even if you don't do anything but listen, you're helping already. The reason is that the person discovers himself while talking to you, which is also what psychologists do. People say: "An actor can even play his role on a bad day." Yes, of course he can! But it will never be the same performance as on good days.

For instance, I think that the culture of getting annoyed when something bad occurs is very strong whereas the culture of celebrating good occasions is very weak. Therefore, we at AGT try not to miss an opportunity to celebrate even small events. This can mean, eating baklava in the production or having a cake with another department. When our export or the local sales market department close the month beyond expectation, we celebrate this together as a team. If you value your product sincerely, you can also see the return.

bulletin: The cooperation between a plant owner and the plant supplier depends largely on the collaboration of the respective teams. In your opinion, how does this cooperation have to be for the project to be successful?

Mehmet Semih Söylemez: The concept of AGT is “Birlikte başarmak”, which is also the title of my latest published book “Achieve with us!”. It is not sufficient to be together with hundreds of people here at AGT. It’s like a table with three legs belonging together: our suppliers, our customers and us. Therefore, we need to understand each other very well and we need to take the project together step by step. We need to determine what our need is and then what solution you, as a supplier, can offer us. If the cooperation and understanding between the involved companies is not given, you will not achieve the expected success. You can start a project with great excitement, but you have to show patience and spend some time with it, which can be very challenging.

Imagine that the installation period of a new production line takes approx. 10 to 12 months. Beforehand, you need to spend the same time developing the project carefully with your partner, in this case Siempelkamp, which we did as a team. When we started the realization of the first project we had several layout alternatives we discussed. After concluding on the final layout – I think on the 220th layout – also considering the second MDF line, we weren’t exhausted at all.

bulletin: The MDF plant you last ordered from Siempelkamp is currently in the assembly phase. How do you evaluate the current state of affairs – and how satisfied are you with the

new 3D features, implemented by our Belgium subsidiary Sicoplan?

Mehmet Semih Söylemez: The 3D scan is very very important, especially when a second production line will be installed in the same area: Is there any overlap somewhere in the outdoor area, such as overlap with the piping or steel structure? We used this opportunity with Sicoplan and could benefit a lot. Using the 3D scan you can work as if it’s already built and as if you just go out and have a look at it. You can eliminate almost all risks with the 3D scan and 3D planning.

bulletin: The Siempelkamp systems at AGT are “state-of-the-art” plants, so we are always proud when we can show other customers these plants within the scope of reference visits...



Onur Güven (CEO AGT Ağaç San. ve Tic. A.Ş.), Mustafa Söylemez (Member of the Board AGT Ağaç San. ve Tic. A.Ş.), Nilgün Binbay (Sales Assistant Wood Division, Siempelkamp), Ahmet Söylemez (Member of the Board AGT Ağaç San. ve Tic. A.Ş.), Ulrich Kaiser (Head of Sales, Siempelkamp), Mehmet Semih Söylemez (Member of the Board AGT Ağaç San. ve Tic. A.Ş.)

Mehmet Semih Söylemez: AGT’s slogan is “for those who want innovation”. According to this state-of-the-art technology it is a must for us when we decide to make a new investment. We are especially excited by the fact that Siempelkamp gives importance to the infrastructure of Industry 4.0 and now we talk intensively about Prod-IQ® next. When we think about Siempelkamp, it’s not just iron and steel we are talking about. The software is as important as the equipment and machinery, so implementing Prod-IQ® next is one of our goals.

bulletin: A prominent topic at LIGNA 2019 is resource efficiency. Where do you see the greatest challenges for your company?

Mehmet Semih Söylemez: This is a very important topic for us as our biggest raw material is wood, methanol for the glue production has to be imported, which we aim to use very carefully and very efficiently. Of course, glue is one of our most important subjects regarding resource efficiency; also pMDI resin is one of our interest fields. Our R&D center is working on how we can reach the level of zero formaldehyde. We are aiming to use all the opportunities in resource efficiency in the best way, including logistics. In particular, we want to use the imported products more efficiently.

Moreover, we focus on the efficiency and optimization of human resources, the extension of the automation – but indeed the most important resource is the efficient use of time.

bulletin: What do you expect from this year’s LIGNA?

Mehmet Semih Söylemez: As the fair is only once every two years I wish to see something different on the digital side. I am fascinated with the issues related to Industry 4.0 and also autonomous systems for more accurate data. The self-optimizing production line is one of our goals, and I think that we are the right partner for Siempelkamp to develop this.

bulletin: Which aspects of a Siempelkamp plant are trendsetting for you?

Mehmet Semih Söylemez: There are different companies producing presses in the world. Siempelkamp delivers the ContiRoll® press as the heart of the production line, but the overall plant concept is of prime importance for the performance of a wood-based panel factory. Siempelkamp is able to deliver the best concept starting from the wood-yard to added-value processes from one source. For me, Siempelkamp is not only a machinery supplier but also an engineering company and a system provider.

bulletin: Generally speaking, what is the reason that Siempelkamp has been, over such a long period, and remains AGT’s “partner of choice”? >

Mehmet Semih Söylemez: Siempelkamp and AGT began a long lasting relationship when we started to think about an MDF investment in 2008. Even though the investment for the first MDF plant wasn't realized until five years later, we were always in contact with Siempelkamp through Mr. Michael Krockner. It is very important that GIM Export represents Siempelkamp properly as it facilitates most issues. The project phase designates this long relationship before signing a contract. Siempelkamp gives confidence.

bulletin: Actually we constitute win-win-situations in some aspects, so that our cooperation is a case of mutual learning and sharing ...

Mehmet Semih Söylemez: Yes! In our cooperation with Siempelkamp we, as a customer, are supporting developments of Siempelkamp equipment. As we use the machinery and equipment every day we can see the potential and recognize where we would like to see further developments. With comments and feedback we contribute to the continuous improvement of Siempelkamp's machinery. We are a dynamic R&D center for Siempelkamp.

bulletin: As the great business personality that you are, what is generally important to you for AGT to remain on the course to success?

Mehmet Semih Söylemez: We are a company making decisions very quickly after consulting. This only works when two issues are considered: If you cannot make a decision you cannot proceed, and if you make a quick decision but without consulting, this is also not right. All members of our board of directors, including my father, my brother, Mr. Onur Güven, and I, have very different ideas, but we sit together and talk and decide in a consensus, not by the majority of votes. Sometimes

they ask us if it is not difficult with 4 people on the board of directors. I can easily answer with "no" as 4 people have to say "okay" to make a decision.

I think our strong point is that we can come to quick decisions. If we couldn't do this, for example, in January 2018, we wouldn't have decided to make a second investment with you. And I'm glad we signed the contract at that time.

bulletin: One year ago, your book "Achieve with us", which we read and enjoyed, was published. We are interested to find out whether there will be another book and what the topic of it might be.

Mehmet Semih Söylemez: It takes me a few years to determine the subject but there are a few topics I am thinking of; for example "reverse mentorship". Beginners or students who start working for a company give advice to the general manager. For example, the general manager can be 65 years old, but the student or a beginner is 25 years old and the target group also consists of 25-year olds, so they can give advice about how to reach this clientele. I think that this topic will become more important in the future throughout the world. I could probably write about this.

There are about 5 kids from the zero-generation that I have contact with and ask for advice. One of them is my daughter who was born in 2001, so I can handle this subject. I want to address this topic to the 20 to 30-year olds as most people usually determine their 100 years of life within these 10 years, for example their spouses, their business, and many more decisions.



AGT: management and youth in contact

The second reason is that I want to have an unheard concept. My first book, named "Emotional Capital", and also my second book have unique themes, although there are lots of books on how to succeed. When I decide on the topic I will share it first with you.





Administration building VMG Industry in Mogilev/Belarus

Interview

2



Sigitas Paulauskas, CEO of the Lithuanian Vakarų Medienos Group

“Trust, right from the very beginning.”

Sigitas Paulauskas, CEO of the Lithuanian Vakarų Medienos Group (VMG) in a conversation with Hans-Joachim Galinski, Siempelkamp. Sigitas Paulauskas and Hans-Joachim Galinski met in the beginning of the 1990s at LIGNA. 2019, almost 30 years later, both met to exchange thoughts about their long-standing business relationship.

Klaipėda and VMG



From sawmill to a vision

Klaipėda (Memel) is a port city in Lithuania. Until 1920 it was the northern most city in Germany with the northern most ice-free port on the Baltic Sea. In 1898 Friedrich Kraus from Frankenthal (Palatinate) established a sawmill for the production of cigar boxes here. 120 years later Klaipėda is the economic and cultural center of Western Lithuania. The once modest sawmill developed into the Vakarų Medienos Grupė (VMG), an internationally operating wood-processing company. Under the leadership of Sigitas Paulauskas, CEO of VMG, VMG has become one of the most important companies in Lithuania. Six state-of-the-art production locations, exporting their products to Europe, Asia, Australia, and America, reflect the work of a visionary businessman.

Hans-Joachim Galinski/bulletin: Sigitas, we met for the first time almost 30 years ago at the Siempelkamp booth at LIGNA in Hannover. “I should introduce Siempelkamp as a company and the secrets of the wood-based materials industry to you.” After two hours you said goodbye and added: “I will come back and order a plant for the production of wood-based materials.” You kept your word and ordered the first of three state-of-the-art particleboard plants from Siempelkamp in 2005. This first plant was built in Kazlu Ruda in south-western Lithuania. In 2010 your order for Mogilev in Belarus followed. In 2018 you commissioned us with the supply of a particleboard plant for Akmenė, close to the Lithuanian border to Latvia. Despite our long-standing relationship I have never asked you how you got your start in the wood-based materials industry.

Sigitas Paulauskas: It just happened because I was the chairman of the executive board of the Vita trading house from 1993 to 1995. During the privatization process, started in 1991 in Lithuania, many previously state-run companies were offered for sale. Thus, we were able to acquire the companies AB Klaipėdos mediena and UAB Giriu Bizonas. Even back then these companies were already manufacturing high-quality particleboard and therefore fit perfectly into our strategy. Our objective was to establish an internationally competitive furniture and supply industry in Lithuania.

Hans-Joachim Galinski/bulletin: From your point of view, what were the biggest changes in the wood-based materials industry during that time?

Sigitas Paulauskas: The wood-based products industry has experienced an unprecedented concentration process during the last few decades – a worldwide phenomenon. Formerly characterized by medium-sized companies, the wood-based products industry has been reduced to a few companies. We have recognized this development in due time and, by acquiring modern and high-performing plants, we opened up the possibility to remain competitive in our markets. Not only particleboard, but also plywood, sawn timber, and furniture components are part of our portfolio.

Hans-Joachim Galinski/bulletin: During this long time, is there anything that remained constant?

Sigitas Paulauskas: The most important constant has always been the reliable cooperation between our two companies. The strong partnership with Siempelkamp gave us security and brought success to all involved parties. We are glad that we are able to say this and are proud of our nearly 30 years of cooperation.

Hans-Joachim Galinski/bulletin: What were the key learnings for you and your company during the long-standing involvement in our industry?



Hans-Joachim Galinski, Siempelkamp, mit ContiRoll®-Modell



Sigitas Paulauskas: Despite the fact that Lithuania experienced several political systems, constant economic up and down with many government and legislative changes, one of the most prominent companies in the country is still manufacturing at exactly the same place where Friedrich Krauss founded the company.

Of course, we have learned a lot in recent years from competitors and Siempelkamp technologists and have transferred this knowledge to our personnel. Nevertheless, one thing became clear to us. Without the traditions of the hard-working people that live here in Klaipėda, without preserving their priceless knowledge and passing it down from generation to generation, the company would not be where it is today. Especially the pronounced quality awareness of the people living here is an outstanding characteristic of their work.

Hans-Joachim Galinski/bulletin: With the knowledge of today, would you have made different decisions along the way?

Sigitas Paulauskas: I would have not only built plants for the production of particleboard in Lithuania, but also plants for the production of OSB, MDF, and HDF.

On the one hand, our country has a huge abundance of the necessary resources to produce these products. On the other hand, such a diversification would be good for the

Lithuanian industry and would make the country more competitive on international markets.

Hans-Joachim Galinski/bulletin: What are the reasons that Siempelkamp became and remained your “partner of choice” over such a long period of time?

Sigitas Paulauskas: There was trust right from the very beginning. Trust in the people that I met and in their knowledge which they were willing to share with me. With it came the realization that Siempelkamp was always a step ahead and has always been able to surprise us with the best technical solutions. The confidence in Siempelkamp’s abilities was never disappointed; all joint projects always achieved their objectives. The quality awareness, deeply rooted in our company, results in success for all involved parties.

Hans-Joachim Galinski/bulletin: What were the most distinctive milestones for you in our joint history and why?

Sigitas Paulauskas: In 2010 we ordered a particleboard plant for Mogilev in Belarus. Shortly thereafter, we recognized that we did not assess all risks correctly. It came to delays, inevitably the entire project suffered. Luckily, we had the right partner by our side and Siempelkamp showed great understanding for the critical situation. At the end, production was started on time, despite all problems. Today the plant in Mogilev runs like a clock achieving a capacity which exceeds the guaranteed capacity of the plant by far.



Contract signing in April 2018 at VMG location in Klaipeda / Lithuania: Team VMG and team Siempelkamp

VMG production site in Mogilev/Belarus

Hans-Joachim Galinski/bulletin: Last year VMG ordered another completely new particleboard plant from Siempelkamp. This current project will be implemented in the north of the country, in Akmene. How is the project progressing?

Sigitas Paulauskas: I am very pleased that this plant is being built in Naujoji Akmene, Lithuania, where it will create 150 new jobs. The Siempelkamp specialists, engineers, and technologists are building a state-of-the-art plant which is unmatched in Europe. This facility will manufacture more than 600,000 m³ of particleboard per year with a thickness ranging from 3 to 40 mm. The employed technology will exceed previously applied economic as well as environmental standards.

Hans-Joachim Galinski/bulletin: A look into the future: Which plans and visions are you preparing? What would you like to implement for and with VMG?

Sigitas Paulauskas: Our plans go far beyond the Naujoji Akmene project. Until 2023 we plan to invest another 500 million Euros and create 2.500 additional new jobs. Furthermore, we also plan to get involved in the USA.

Hans-Joachim Galinski/bulletin: Where do you see the biggest challenge in our industry in the years ahead?

Sigitas Paulauskas: We will certainly be faced with many new challenges. Our personnel will thereby play a key role. We will ensure that our personnel are prepared for their responsibilities. The motto is “Smart Personal”; we need a confident team that is excellently trained and works responsibly with the new Siempelkamp plants.

Hans-Joachim Galinski/bulletin: Sigitas, thank you for this interview and best wishes to you and your company!

Interview

3



Fabrika Berneck S.A. Paineis e Serrados,
Curitibanos S/C, Brazil



Gilson Berneck, President Berneck S.A.



Daniel Berneck, Industrial Director Berneck S.A.

„The integrated plant: everything must be inherently consistent“

For 35 years Berneck S.A. Painéis e Serrados, Brazil, has trusted in Siempelkamp's expertise in the area of wood-based panel plants. In December 2018 the company ordered its 5th production plant and became the first customer ordering Siempelkamp's most advanced technology – the ContiRoll® Generation 9 NEO. In an interview with Werner Masnitza, Siempelkamp's Sales Director for South America, Gilson and Daniel Berneck talk about a long-standing cooperation, Berneck's commitment to resource efficiency, the company's goals, and the value of LIGNA.



Fabrika Berneck S.A. Paineis e Serrados – Araucária PR, Brazil

Berneck:

From Brazil to the world

- 1952 founding of Berneck S.A. Paineis e Serrados as a sawmill in Bituruna by Bernard von Müller Berneck
- Specializing in MDP, MDF, and HDF, furthermore sawn wood in pine and teak, owns plants with high production outputs and cutting-edge technology
- Owns 63,000 hectare of plantation area
- Plants 4,000,000 new trees each year
- Owns 170,000 m² of production and administration area
- Trade relations to more than 60 countries
- Vision: "To be recognized as the best option for its shareholders, customers, and employees in generating values for the excellence of its products and solutions, acting in a sustainable way in the global market."

bulletin: Thank you Gilson, thank you Daniel, for giving us the opportunity for this conversation. We are very happy to be here. Gilson, Berneck and Siempelkamp have been working together for 35 years. What is the largest value added of a Siempelkamp plant for you?

Gilson Berneck: The biggest value I think is the relationship between the companies. I believe that there must be a strong trusting relation. A mutual trust. And this trust is thriving, and has prospered throughout these 35 years.

We had an experience which I would like to share. This dates back to the time when we purchased our first continuous press from Siempelkamp. After 5 years, we had a technical problem in the main infeed roll, which had worn out and had a technical problem, which technically I'm not able to explain. However, the fact is that Siempelkamp, in particular Dr. Fechner, when he became aware of our problems, even after the 5-year warranty had expired, took the initiative to change the roll. I mean, Siempelkamp sent a new roll. This is the trusting relationship which must exist between companies.

bulletin: Siempelkamp and Berneck have built a long tradition as family companies. What does a family company need to do to be successful in the market, in your opinion?

Gilson Berneck: Look, I cannot say what a company must do; I would like to say what Berneck does. I believe, following the same thought as earlier, you need to have a trusting relationship with your customers, which is the case for us.

With our customers we try to maintain a very strong trusting relationship. Additionally, we strive for high quality products, which you can only produce with cutting-edge technology, and low production costs.

I think the company always has to focus on producing at low cost, so it meets the conditions to compete in the market, because the market is always evolving and therefore cost is very important.

bulletin: What are the biggest challenges for your company and your market?



Gilson Berneck and Werner Masnitza in conversation

Gilson Berneck: Berneck exports more than 30% of its production. The world market is a big challenge because it undergoes a lot of changes. At the moment we are living this change, let's say, this misunderstanding between China and the United States, I do not know if the word is misunderstanding, but anyway ... it affected the market tremendously!

These effects make an impact. Our 30% share in exports is significant for us. It affects the company. These world changes, I would say, are the biggest challenges, that is, in addition to what I have already pointed out, which was cost. You have to be always focusing on cost and product quality.

But the greater challenge that is much harder to deal with are these global political interferences.

bulletin: What innovations from a complete Siempelkamp plant are trends for you?

Gilson Berneck: I think all of them – because a complete plant has a beginning and an end. I think everything is important, everything has

to go together. Everything has to be harmonious for a plant to work like a clock. I say clock because it is something that works properly. The lines that we run have a technology that has not caused any real problems since day one. Problems do exist, but they do not affect the profitability of the company. I think the machinery is good ... but the technology must evolve as a whole.

bulletin: A new generation is starting to work at Berneck. How do you assess the cooperation with Siempelkamp so far?

Daniel Berneck: I would say the following – although I am more involved now, my involvement with the company has been since I was born. I know Siempelkamp since the beginning, since our first line. Although I was not working here at the time, I used to come here to play when I was a child. So, the name Siempelkamp has always been present in my life ... And it's a continuation of what happened to my father. I see that we always had this collaboration; our companies are always quite close together when working on a project. I always see it in a positive way, and for us it has always

been a very good experience. So, I share the same feelings as my father for Siempelkamp.

bulletin: Daniel, what goals have you set for yourself?

Daniel Berneck: For myself? Let's put it this way, I would like to be able to continue the work of my family in the wood-based panel market – always searching for the best cost, the best quality, always looking for a good relationship with suppliers. Always seeking a positive relationship with society, with the company surroundings. Always seeking to consume the minimum of natural resources, which are limited, we know that ... and to make sure the company is in harmony with the environment it is in. I think that this would be a goal I would like to achieve, even though it does not have an end, there is no way to reach it, but it is always what you seek. So, that's what I would like, let's put it like that, a goal to pursue.

Publisher

G. Siempelkamp GmbH & Co. KG
Marketing/Communication Department
Siempelkampstr. 75
47803 Krefeld (Germany)

Executive Editor

(Officer responsible for compliance
with German press law)
Christian Hassler

Text

Dr. Silke Hahn, Christian Hassler, Carola Lenkewitz

Design and Layout

Sebastian Paetau – Grafik & Konzept

Printing

KARTEN Druck & Medien GmbH & Co. KG

This publication is published in German
and English. Reprints, in whole or in part and
including illustrations, require the Publisher's per-
mission, which in most cases is gladly given.

Visit Siempelkamp on the Internet:

www.siempelkamp.com



Siempelkamp