

iMagazin

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Individualization and efficient automation

 **IMA**
LEADING TECHNOLOGIES



EDITORIAL

Dear readers,

Panta rhei – everything flows– that is how a major branch magazine titled a report on the transformation of operations of the furniture manufacturer fm Büro-möbel Franz Meyer GmbH & Co. KG from series production to a complete integrated and automated batch size-1-flow production by IMA. Everything flows – that now also applies to the furniture production. Currently, individualisation and small batch sizes are trumps. With our batch size-1-system we give furniture manufacturers and craft trade companies the possibility to successfully attend to this development. This was likewise recognised by the bathroom furniture manufacturer Sanipa, who recently invested in IMA technology.

There is also a lot flowing at IMA: it was an exciting year with a pleasing result as yet. As of recently, Andreas Rinke as the Manager of Engineering is responsible for the divisions production as well as research and development. In addition, we welcomed 19 new apprentices in seven commercial and technical training professions and three dual courses of study on 1st September 2014.

I would like to wish you all a peaceful and contemplative time during the upcoming festive season and turn of the year, despite the bustle, and, of course, a great start into a successful New Year!



Rüdiger Schliekmann,
Managing Partner of
IMA Klessmann GmbH
Holzbearbeitungs-
systeme

Company

New Managing Director joins IMA's leadership team

New Managing Director

Andreas Rinke since July 2014



Andreas Rinke, Managing Director of
IMA Klessmann GmbH – Holzbearbeitungssysteme

"Mr. Rinke's appointment as Managing Director is a big step towards the future and is in line with our commitment to providing sustainable solutions. Having him in our team increases our competence in machine and plant manufacturing significantly and helps IMA to realign and further develop its products in this field", explains Rüdiger Schliekmann, Managing Partner of IMA Klessmann GmbH – Holzbearbeitungssysteme.

For more than nineteen years Andreas Rinke has worked in the field of mechanical design at one of the most successful machine

and plant manufacturers in the world. Recently he acted as an advisor to several international machine and plant manufacturers to help them innovate their technological processes and reposition themselves in the market. He sees his main task in further strengthening and expanding IMA's technological leadership in a very competitive environment. *"It allures me to convert sophisticated customer demands into practical solutions with a good team and thus contribute actively to paving the way for a successful development of the company",* says Rinke.



**Work surfaces are part of
refurbishment work.**

Primeway Inc. grows into two locations

Primeway has been successful in its niche of serving office furniture dealers, and the company expanded into a second manufacturing location only a few blocks away from its Madison Heights, Michigan, headquarters in April 2013.

Office, health care and higher education are the main end users for the company's tables, desks and office products. At the second 28,000-square-foot location Primeway is making more casegoods and more flat products. At the main operation they are doing more custom work. "At the main location it is more reception stations and boardroom tables," says Kevin Walby, Primeway president. "We're trying to gear up that second facility to make more of that flat-panel, casegoods, work surfaces, training tables, and simple conference tables." Primeway has 26 employees and is continuing to grow. It is also doing more work surfaces. "We've seen a growing need for surfaces with so much refurbishing going on these days," Walby says. "We have embraced TFL work surfaces, which seem to be a hot commodity with the refurbishers of the industry. TFL provides a good work surface at a little better price point. We've set up a standard program with refurbisher dealers (also called office furniture recyclers) and they have 14 colors to choose from, including maple, cherry and woodgrains." Many times refurbishers will take existing panel systems and strip them down, repaint the metal, rewrap the fabric on the sides of the panel, but the one thing they can't refurbish is the work surface, which is normally a new component, and one of the lesser expensive components.

"When it comes to selling a customer 10 to 100 work stations, it's the work surface

that has to be replaced. There's no way to refurbish that particular part. Both of Primeway's buildings are connected to one server, and the infrastructure is in place to make things as cohesive as possible."

Two edgebanders

Primeway liked its first IMA Advantage 500 L edgebander so much that when they expanded to a second location, they ordered the exact same model. The first IMA Advantage 500 L was bought in early 2012 for the company's main location. Walby explained that they wanted a large heavy-duty, durable machine. "The Advantage edgebander is the only major piece of equipment we added here, because all of the other equipment was relatively new," he said.

"Knowing we were going to expand into our other building, we held off on any additional capital machinery here. Everything was working pretty well." The first 500 L was given a chance to prove itself with a job for a 90-room health care facility. A total of 900 door and drawer fronts were made, and the edgebander worked well on that job. When Primeway began work in the second location, they bought a second Advantage 500L almost exactly a year after the first one. Walby sees several advantages in having two identical machines. One operator can run both, so if there is a problem they can look at the other one.

"Certainly the cross-training of operators on both machines, being able to transfer pre-written programs (are advantages)," he said. "When we put the second one in we took 50 or so programs we had already put into the one machine, just put it into a flash drive and put it into the other. Another big

thing we felt was important was the learning curve to get that piece of equipment up and running. And what I think was a huge value was not having to learn all the different mechanics and nuances and maintenance on an entirely separate machine."

The only challenges for Primeway are keeping everything tuned and running properly. The beam adjusts automatically, it's not a manual process. "We're constantly changing thicknesses and styles," Walby said. "It's important for us to have an edgebander that allows us to do that quickly. If we have a mechanical issue on one of them and we have to do some troubleshooting, we can look at the other one and see what is going wrong, why it is happening."

In 2014 Primeway is also offering a new table line, new casegoods line, and has connected with new dealers in Michigan and the southern states. The year 2013 was a good growth year, and 2014 can be similar or better. Future plans are to move to a single location, maybe in three to five years. "In 2013 we aligned ourselves with some great clients that are also growing," Walby said. "We are working with six or seven new clients in early 2014. We're hoping to triple our customer base in 2014."

Paradigm shift

Converting operations from series production on to a batch size-1-flow production

The fm Büromöbel Franz Meyer GmbH & Co.KG (fm) is converting its operations from the series production to a fully integrated and automated batch size-1-flow production. The system was designed and developed by IMA Klessmann GmbH – Holzbearbeitungssysteme and consists of fully automatic high rack warehouses, cutting station with two Performance.CUT dividing plants, edge loop with laser edging, sorting and rack buffer, drilling and assembly line as well as the entire logistics required. With a throughput time of only four hours its speed is unrivalled and currently one of the most modern office furniture production systems.

With the switch from the series production to the consistent batch size-1-production, fm executes a fundamental paradigm shift. *“At the moment we are only able to produce workpieces in one colour, one décor or from one series. Whatever cannot be directly processed or delivered, must be stored for the time being,”* explains Erwin Landwehr, Plant Manager at fm. With the new system, fm can load the finished furniture directly from the assembly line onto the truck. The concept of flow production was developed by the IMA Klessmann GmbH – Holzbearbeitungssysteme. Rüdiger Schliekmann, Managing Partner of the Lübecke-based manufacturer of production systems for the

wood processing industry underlines that *“with the new plant fm benefits from the most recent developments by IMA. This guarantees reproducible high workpiece quality and highest possible process safety.”*

And this is how the production process will look in future:

From cutting to edging

Forklifts transport the panels, that are delivered by truck, in packs to an automated high rack warehouse. The unmanned operator unit sorts the packs with chipboards MDF, OSB or solid core panels in the store. On the return trip it takes picked panels from the store according to the respective order. These are transported to the IMA cutting station. This consists of two Performance.CUT machines working in parallel. Together both absolutely identical machines achieve a cutting performance of approx. 2,500 workpieces per shift. *“Not only do our Performance.CUT systems work more efficiently and resource-conserving than conventional saws, they also deliver significantly higher cut qualities, since the panels are milled and not sawn,”* explains Rüdiger Schliekmann.

After being cut, the workpieces are all aligned lengthwise and labelled. Then the belt conveyor system forwards the pieces to the various receiving stations: The chamfered rear panels, which do not require edging, are discharged automatically. Workpieces with excess width that are not suitable for

the edging loop or more complex freeform panels are discharged over a distribution station or forwarded to the CNC processing centre BIMA Gx60 E. Leftover panels are either returned to the store, manually removed as hand rests and also managed or transported to recycling or chipping. All other workpieces land in a vertical puffer unit positioned upstream of the edging station.

Automated edging loop with laser edging

Edging using the laser edging method means a further quality improvement, because the laser technology ensures a flush and smooth join between edge and panel. That means a significant gain aesthetically and increases the durability and functional performance of the final furniture item. In order to be able to realise the batch size-1-production that is independent of the geometry of the workpieces, the edging is performed while passing through on two linked (integrated), one-sided edge processing machines, type Novimat.

Here an intelligent slide-in feed and stop system ensures parallelism and angularity and reduces measurement tolerances to a minimum. A system of transport belts and rollers between the edging machines and at the end of the edging station guarantee the highest transport performances while ensuring the best possible care and protection of the workpiece surfaces.



Sorting and rack buffer

The workpieces are stored temporarily in a high dynamic sorting/rack buffer designed by IMA to bring them into the order required for assembly after edging. The unit consists of two lanes, each with two racks and two operating units. The software-controlled storage of the individual parts is performed chaotically wherever there are free spaces. The retrieval output follows the assembly criteria. A vacuum port distribution unit forwards the workpieces to the front drilling machine or the body drilling and assembly line of IMA Network's partner Priess + Horstmann for further processing and final assembly.

Own edging for desk and freeform tops

The processing and final formatting of large desktops and other freeform surfaces is performed on an IMA processing system type BIMA Gx60 E. Here the workpieces receive their laser edging and the required assembly drill holes before being processed further.

Central master computer control ensures smooth running

The control of the entire, complex unit is performed by a central production master computer by IMA's partner 3TEC. It schedules the outgoing truck tours, configures the panel materials for the cutting station and creates optimised cutting plans. In addition, the central process control guarantees the precise traceability of each and every workpiece.

Outlook

The drilling and assembly line of the IMA Network partner Priess + Horstmann as well as the IMA sorting and rack buffer unit were installed and started operating already in 2012. At present further system parts are being integrated. The entire production is scheduled to be converted in the spring of 2015. *"We are optimally equipped for the future with the new production plant in operation. Where previously similar pieces of furniture were produced in series, we can now produce individually and order – related – and that in record time,"* explains Erwin Landwehr.



fm Plant Manager Erwin Landwehr (right) and his deputy Christopher Moormann (left)

IMA
Service



Simply "greasing" doesn't do the job!

With an event on the topic 'Servicing and Maintenance Management' the IMA Klessmann GmbH – Holzbearbeitungssysteme and the College of Cooperative Education Wood Technology Melle offer a further cooperation seminar for the dual study course Wood Technology.

The College of Cooperative Education Wood Technology Melle (BA Melle) has been training engineers for wood technology for 14 years. Currently there are 14 women and 51 men studying in a dual, practice-oriented course of studies. The engineer training covers six theory blocks at the BA Melle and seven practical blocks in apprenticeship companies in the wood and furniture branch. *"Learning on site, that is how we describe our joint cooperation seminars with the machine and supplier industries,"* is how Joachim Martin, Director and Head of Studies of the College of Cooperative Education Melle, explains the special learning method. During this time the students leave the seminar room in Melle and enlarge upon the theoretic principles at leading machine and plant manufacturers as well as suppliers in the region. For more than five years, the 2nd semester students have also visited the company IMA Klessmann GmbH – Holzbearbeitungssysteme in Lübbecke. *"The corresponding seminar is called 'Industrial Furniture Production',"* explains Markus Sauter, owner of the Engineering and Management Office Sauter (IMS) in Rosenheim and Bad Bocklet, who presents the theoretic principles in this seminar in Melle. After two thirds of the time has passed, the learning venue switches to Lübbecke to the premises of the company IMA Klessmann GmbH – Holzbearbeitungssysteme. Here in impressive presentations, on-site walk-about and lectures, the students get to know the latest machine technology. *"When learning on site, the students are instructed by experts. They come directly in contact with the machines and plants and can ask specific questions,"* is how Markus Sauter clarifies the seminar concept and adds with a twinkle in his eye, *"Then the final examination at the BA Melle is a piece of cake!"*

Building on this experience, a further cooperation seminar 'Servicing and Maintenance Management' was started in October 2014. This seminar addresses students, who see their individual focus in production technology of industrial furniture manufacturing companies. Part of the four-day event is a 'Learning on Site' seminar on the topic 'Service Concept IMA'. This takes place at IMA Klessmann GmbH – Holzbearbeitungssysteme in Lübbecke and provides the participants both a theoretical as well as a practical insight into the IMA Service Concept. Six 1st semester students from the BA Melle, mainly from the kitchen and office furniture industry, disassembled cabinetry and the caravan industry participated in the last event on 29 October 2014.

Dual studies course



Bathroom furniture manufacturer

The traditional Wettelsheim company made the largest investment in the company's history with a total of four million euros for new production machines. A new edging plant from the company IMA Klessmann GmbH – Holzbearbeitungssysteme, including peripheral equipment, and a wrapping station from the companies Wemhöner Surface Technologies (Herford), serve the further automation of the bathroom furniture production at Sanipa.

Six years ago, the company Sanipa that is based in Wettelsheim went through the worst crisis in its history. Today the bathroom furniture manufacturer is doing better than ever. In cooperation with the parent company Villeroy & Boch, that took the helm in 2008, the company recently invested four million euros in new machines for the flow production of furniture body parts and fronts for bathroom furniture. Meaning that this was the largest single investment in the 35-year history of the company Sanipa. An edge processing machine of the type Novimat, including laser edging, closed-loop, as well as a rotary portal in the infeed and outfeed was purchased. Also included in the flow production system designed by IMA are hedgehog buffers by the company Horstkemper, a drill station from the company Koch, a buffer and sorting rack from the company Systraplan, and the

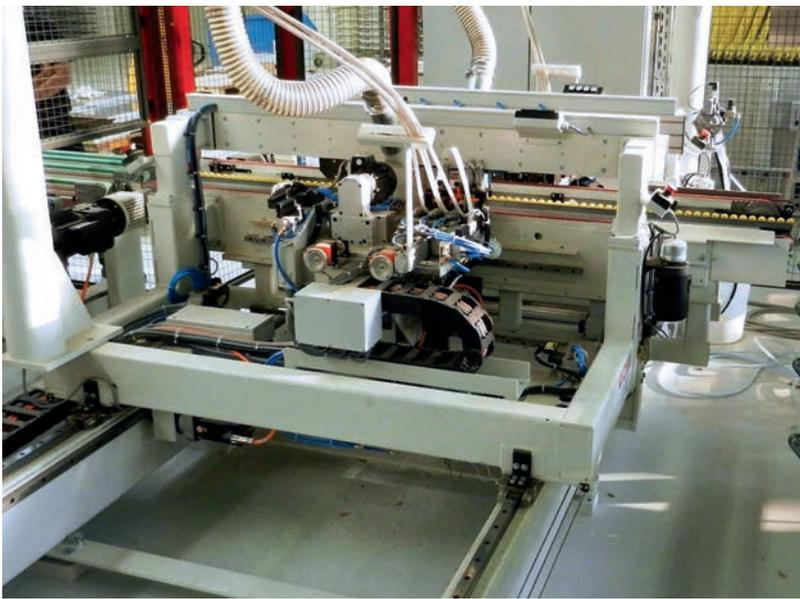
manufacturing management control system from the company 3TEC – all companies are long-standing partners of IMA.

Efficient automation

Thanks to the automatic, single edging while passing through, the construction parts can be edged without any manual intervention – optionally using classic bonding with PU adhesive, or using the laser edge method. Here the IMA Flow Production replaces several processing steps on individual machines, reduces the in-plant logistics to an absolute minimum, and cuts the processing time drastically. A special challenge for the IMA project team was the edging of the narrow side of bands or cross members, the so-called 'narrow parts'.

"The shorter the process length, the more difficult the clean copying of the edge," explains IMA Project Leader Martin Schreiber. The regular minimum processing





Sanipa invests in **flow production**

length of 150 mm was undercut and the Sanipa's desired processing length of 100 mm could be realised. Taking processing speed and workpiece gap into consideration, even shorter processing lengths are run. So IMA confirms once more its technological leadership. *"Anyone can stick an edgeband on. Here we are talking about factors such as speed, performance, reproducible high quality and efficiency. Our customers can expect high process safety from the plants we supply,"* explains Rüdiger Schliekmann, Managing Partner of IMA Klessmann GmbH – Holzbearbeitungssysteme.

Concept of high efficiency

With the two new plants, the edge processing machine and the wrapping station, Villeroy & Boch and Sanipa continue to work on their concept of high efficiency. For example, Sanipa provides all production parts with a barcode, which

enables computer-controlled logistics within the plant halls. The parts that are placed space-savily in the interim store are specifically selected by the grabber and transported to the machines for further processing using conveyor belts. *"This ensures additional capacity that we urgently require due to the expected growth,"* explains Herbert Stabauer, Head of Technology at Sanipa and member of the Executive Board.

Employees as the basis of corporate success

The official start-up of the new machines took place recently as part of an employee celebration at Sanipa. Because despite the increased automation of the bathroom furniture production, the number of employees has also increased in the company. Presently there are 130 employees at Sanipa, of which 25 were recently newly recruited.

And it ultimately comes down to the employees, District Administrator Gerhard Wägemann pointed out in his greeting at the festive gathering.

Positive business development

Andreas Pfeiffer, Chairman for the division 'Bathroom and Spa' in the Villeroy & Boch group, is confident that the 'consistent reorientation' since 2008 has proved to be successful and the plant is today more profitable than ever before. *"You can be proud of what you have achieved here. The growth on the market and in production will accompany us through the next years,"* says Pfeiffer. In the current business year Sanipa achieved an increase in turnover of 25 per cent and the turnover is expected to even double. It was not easy *"to turn an idea into reality"* states Herbert Stabauer. However, now a good foundation has been laid for the further development.

**Product
&
Market**



Start of apprenticeship at IMA: 19 new apprentices



By beginning their apprenticeship at IMA Klessmann GmbH – Holzbearbeitungssysteme, 18 young men and one young woman embarked upon their professional lives in seven commercial and technical training professions with three dual courses of study on 1 September 2014. With this addition IMA presently offers 72 apprentices (10% training quota) a perspective on the labour market.

“Well trained employees are an important cornerstone for the success and the competitive ability of every company. As a manufacturer of highly complex machines and plants, we are particularly reliant on competent, qualified staff. And the best way to gain such employees is to train them ourselves,” explains Reinhard Spilker, Head of HR at IMA.

The various training possibilities and good opportunities for the start into a job with responsibility within the corporate group make the traditional Lübbecke-based company a popular employer in the region. The offer to combine work and studies as part of a dual training course is relatively new. The ‘campus Minden’ of the University of Applied Sciences Bielefeld is the cooperation partner for the dual courses of study to Bachelor of Engineering in the subject area Electro-technology and Machine Construction. All new apprentices

go through numerous departments during their apprenticeship. Many of them see the apprenticeship or the studies as a basis for a further career and take advantage of the many further and advanced training courses and the opportunity for advancement that the IMA offers them. As successful employees they contribute significantly to the success of the company. This demographic change of the years to come will be managed with homegrown talent, so to speak.

Wago foundation honours the region’s best apprentices



Verena Kähler, dual student at IMA Klessmann GmbH – Holzbearbeitungssysteme was placed first at this year’s sponsorship award ceremony of the WAGO foundation for the training profession ‘Industrial Clerk’ and can now enjoy one of the coveted sponsorships. The WAGO awards are presented to the examinees, who achieve the best final examination results in commercial or industrial fields within the district of Minden-Lübbecke.



Verena Kähler and Jörg Sieker (IMA commercial trainer) at the award ceremony of the WAGO foundation

International Trade Fair participations

Current Trade Fairs at: www.ima.de/en/company/fairs/



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