# BÄUMER MAGAZINE



THE LOOPER TURNS 60 PAGE 4 + 5

**B-TRACE - RELIABLE FAULT DIAGNOSTICS** PAGE 15

WHERE SCHOOL AND WORK COME TOGETHER PAGE 22+23



## **WE NEED TO PREPARE** TO CHANGE OUR VIEW OF PAST. PRESENT ANI **OF PAST, PRESENT AND FUTURE WORK.**

Nina Patisson, Managing Director

Dear Customers and Staff.

Family friendliness means a great deal to me, because balancing work and family life is very important to today's generation.

The needs of the different generations vary greatly, as I have experienced myself. My grandfather experienced life after the war and lived to work. It was different for my father: He worked to live and so that he could provide for us comfortably as a family. For me personally it is particularly important to bring balance to my work and personal life. Experts are of the opinion that the next "Generation Z", which includes my children, for example, will separate work and personal life more distinctly, yet again needing an altogether different way to be motivated, such as having a positive work environment and a different way to appreciate things. We need to prepare to change our view of past, present and future work. After all, three different generations come together to work at Bäumer every day.

Every person beats to a different drummer, and needs vary. This is why assumptions do not apply the same to everyone; no one should have to bend over backwards for others or be forced into a mold. Family and work do not

have to be a contradiction in terms. As Managing Director, this is how I see it. I am also familiar with this balancing act from my own experience.

Mr. Leisse and I both have families and are familiar with the organizational magic necessary to make everything work. The same can be said about feeling torn with inner conflict, which is something I experience.

No matter whether we are talking about employees who have to care for family members or mothers who need flexible work hours, we really want to provide our support. In recent years we have made some headway, such as introducing flexible work hour models, part time work and work from home, cafeteria food discounts and fitness classes, the latter of which also include family members. Whenever possible, we make sure our field technicians can make important family appointments. We try to help our employees and support their families in whatever way we can.

The doors of management are open. Stop by and talk to Mr. Leisse or to me, because we are "family" and have families just like you do.

Sincerely, Nina Patisson, Managing Director

# **STEPPING INTO THE FUTURE** WITH VISION AND A MISSION

Every company needs to adapt strategies to changing market conditions, which in turn influence the decisions and actions made by the executive management and general managers. This makes it even more important to identify with one or more constant values.

People within a company want to know what their company stands for and what the significance is behind their own work.

#### The vision reflects desires and goals

A good company vision makes it possible to unleash powers undreamt of. A vision provides a picture of the future whose actualization represents a long-term goal. The vision describes something positive, a condition or development that is worth striving for. The vision should get all people within the company excited about it.

Remarkable company visions exist that have come to fruition. For example, Microsoft's vision from 1975: "A computer on every desk and in every home." Or Wikipedia's vision: "Imagine a world in which every single human being can freely share in the sum of all knowledge."

Bäumer has evolved over many generations and each generation has influenced the company in its own way. Nina Patisson and Jan Leisse did not want to simply continue business as usual, but rather have taken the time to pause briefly and think about what the company is and where the company should be headed. This resulted in the Bäumer vision.

#### The mission is customer-centric

A vision also includes a fitting mission. This mission is customer-centric. because they also want to know what the company that they do business with stands for.





OUR MISSION



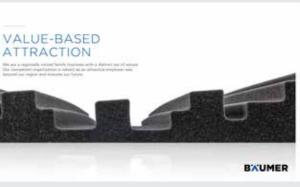
BAUMER



OUR VISION

TRUST







#### A SUCCESS STORY

# **THE LOOPER TURNS 60**

In 1957 a rather large "baby" was born at Bäumer: the BSV-E long splitting machine. To be more precise, the giant baby was approximately 60 meters long and over 8 meters high. Since the foam blocks in the BSV-E ran in a loop and were glued to an oval, the machine was initially just called "the Bäumer", because it was unique at the time. It is our trademark, and many people involved in the foam market immediately chose our company with this unique machine. The term "the Bäumer" is often still used in the market to describe the BSV-E when referring to a looper. As the inventor, this of course makes us particularly proud...

#### Peeling film

Back then, if you wanted to produce thin film material made of foam, you had to use simple peeling machines. A round or square short block was attached to a peeling shaft and conveyed to a band knife, which slowly peeled the block. The thin film material was then wound onto a roller.

This had its drawbacks: The foaming machine had to run often to produce the required short blocks. Only short blocks could be placed on the peeling machine, and relatively speaking there was a lot of waste, particularly when square blocks were peeled.

Another option was to produce film from a longer block in reverse mode. But the demands placed on our customers by the market were very high at the time. Speed and thus the associated productivity were an issue, and this is still relevant today. Longer film was in demand, so the blocks also had to be longer, and the system hit its limitations. Thus came about the first looper, which was developed by Bäumer together with a customer.

#### A real sensation: continuous film as a rolled product

The looper was the first machine on which PU long blocks could be processed. At the time, blocks up to 60 meters in length were fed into the machine and were glued to an oval or a ring. This suddenly made it possible to cut continuous film as a rolled product right from the long block. Bäumer customers benefited not only from greater reliability in quality, but also from the tremendous increase in productivity, which at the end of the 1950s brought with it the completely new concept behind the BSV-E. A real sensation!

The first long splitting machines could cut foam that was up to 800 mm high. This was perfectly adequate at the end of the 1950s and corresponded with the foam technology of the period. Today, the BSV-E handles foam blocks up to 1600 mm high and 2500 mm wide.

Bäumer consistently adapted to market needs and also introduced completely new possibilities to the market. Along with the increase in the height of the foam came the weight that the machine structure had to bear. Today's loopers usually bear up to 6 metric tonnes, and in special cases even up to 15 metric tonnes.

#### Smooth movement of the block was a real challenge back then

The first looper drive was strictly mechanical. The challenge at the time was that the long blocks moved at a constant speed through the cutting knife in order to ensure a consistently high quality. Belts were added at the top and bottom, naturally synchronously coordinated with each other. The side deflection stations initially had rollers, which were later replaced by belts, to ensure stability was maintained and to provide smooth movement of the long block.



#### 1963: First movable tower on looper

An innovation for the looper was the first movable tower in 1963. Previously the BSV-E only had two stationary towers. However, developers had to find a solution to the problem of changing block dimensions as the blocks were processed. The movable tower provided consistent quality up to the last foam sheet. The first BSV-E with a movable tower was erected in 1963 at Metzeler in Memmingen, Germany.

#### Mark-free film cutting

Today the BSV-E is appealing due to its multi-drive technology. By using servo technology for the individual belt sections, the belts are completely synchronized. The belts can operate at a minimum speed of 0.5 meters



per minute. This is important when changing rollers. The belts can continue operating at the minimum speed, thus reducing cutting tolerances.

For film production this means that, due to the continual cutting process, at no time is it possible for undesirable markings to appear in the foam or for the occurrence of imprecise cutting results. After the new roller was wound on, the machine continued to cut at the selected production speed.

Today, the looper is available in four basic versions, and approximately 385 of them have been sold worldwide.

#### BÄUMER MATTRESS NEST

# **PROMPTLY PLANNED AND TRUE TO QUANTITY**

Whenever the material is of high quality and its production is elaborate and expensive, it is particularly important to conserve resources when working with it. This is why nesting programs have long been the standard, such as for first splitting short blocks horizontally and then-with the help of the nesting software-contouring them vertically.

Now there is a new software program developed by Bäumer for horizontal contour cutting machines, which can automatically combine the different mattress programs and nest blocks into a single foam block (short as well as long blocks).

#### Fully automated nesting of daily mattress production - promptly planned and true to quantity

Up until now, the daily production from importing to finishing had to be planned manually. Manual nesting, however, is not true to quantity because the machine operator nested only one type of mattress from the block until the complete block was full. This inevitably resulted in overproduction and warehousing.

Bäumer Mattress Nest makes it possible to carry out nesting true to quantity and fully automatically by planning the complete daily production in one go. Less manpower is required for planning and machine operation. Manual intervention in production is not necessary, but still possible. The complete production is quicker and more cost efficient.

#### Automatic creation of cutting programs and cutting jobs

Bäumer Mattress Nest imports the order data into the system every day or for several days and first sorts automatically them according to the required qualities. Then programs for different mattresses which can be cut out of a short block or long block are optimally nested automatically, and the cutting programs created in this manner are executed in one continuous process on the BÄUMER horizontal contour cutting machines.

Because the cutting program executes the main program (e.g. the mattress contour) and the side programs (e. g. cutting the mattresses to length) in one continuous process, different mattress types (e.g. children's mattresses and overlengths) can be processed in one single short block.

In addition, the program automatically detects during nesting whether different mattresses have to be processed without any interval between cuts or whether an interval must be maintained. The remaining capacity of a residual block is also identified and factored into the calculations allowing for a freely selectable, tolerable waste quantity. In case of larger residual blocks, the order list can be filled with standard sheet dimensions or other orders

R Realizable T											Date Manual				
						_				Cited .	-	-			-
-							-		-	And Inc.					-
-							-			Second States					
-	and the second s	1	a horses	1.144	140	-	-		-						
	-			-	1.00										
				1.000	100.00	1000	100								
	-	THE OWNER WHEN		100.00	1000		1.00	1700	Dame.org	-second					
		Transmission and			1.00.00	1000				10.0 Aurosoft					
	40.000	100000100		1000	100.00	100.00	1.00	1.00	7100.000	THIS IS NOT					
	44,000	10040001444	2	100.04	1,000,000	1000	10	1.0	10000	sold and and a					
100	40,000	THURSDAY NO.		10000	1.000.000	1 I provide	1.000	1.054	(mathematic	distant.					
14	44,000	100000000000000000000000000000000000000		10144	1.00	10.00		1.04	10000	100000000000000000000000000000000000000					
	4.00	100000100		1,000,000	100.00	1000	1.00	1.04	-	With Survey .					
	10,000	100.0001110		1.01104	1,000,000	1.10000	1.00	1.554		100741440					
	41,010	2004001408		100.00	1.000	110.44	1.00	1104	1000	- Ard Passing .	4.1				
	46,000	100000110		100.00	100.00	100.00		1.04		Witness	Transmission into the p				
	44,202	TRANSPORT N		1000.000	100.00	1.000				and an and					
	-	100000000000000000000000000000000000000		100.00	1.000		1.44	-		-0114-000					
	100,000	1000001110		1000	100.04	1.000		11.53		- Colorest					
		10000001010		141100	1.00.00	1000		11,02		stiftered.					
	10,000	100000000000000000000000000000000000000		10000	1000					- The second					
	-6,000	10,000110	1.1.1	10100	10,000	-		11,07		1274000					
	-	10,000,000	1.00	1010	100,000	100.00	- 25	se per		All California -			********	1	
	4,11	10000010	-	100.00		11000	. 44		10000	Aphilements				24	-
	45,51	10		100.00	1.00.10			-	-	ton farmer				2	1000
	4,20	The second second		100.00	100.00	1.000	1.0	- 55		International Contractor					11111
	1.00	Concession of the		100.00			1.20			10000000					191111
	40,000	Tanan inte			100.00	1.000	1.00	100		- mit hannon				10000	
	2.00	Chicago, and	1.1	1000	100	100.00		10		ton formation				6 4 5 5 S - 10 P	-
		Transmittant.		-		100		-		- and Parlian	100000			1	1
		Terrent of		1.000	100.00	1.000	1.00			the statement		_			
		interest of		interior .	1000	- 100.000	1.00			(and designed)					
	-	Transmission of the			1.000	-		-		and income.					
			1.1.1	-	1.000	-	1.77				K				

Bäumer Mattress Nesting

- 19 (19			- 0	R.						Contract of the	(mine)	manner Bieler	-	
														+ + + + + [B120]
	1.0444	- Sealthy -	-	in the second	-	-	-	-	Post late	Public Inc.	- Spinory best.	Natural States	98.4mm 1	the table
	-	-10,200	-	10000	-	-	-		10.00	10.01		an, raman, any	40,0098,01,000	the set of a set of a
	1.000	0.04	1.000	100000		100			14.00.00	4407	anne :		0.711-0.010-0.01	6441 (4.00)
		10,000	14000	******	100,000		-			neart	-	with makers	04,10001,01,000	100.000.00
		8.08	10000	sinter	1.000	1.14				44.01	anar .		Section of the	17 mm
		-4,86	10000	Annual .	10.00		1410010			44.91	-	wi_10790_00_2	ad_10988.0f.1_H0	-
	-044	16,600	( Advent of	(margare)	1000	1.1			-	and in	anal 1			Transformed 1
		10,00		-	-		-			44.94		ad, 54996,54,7	04,1008,0,100	manager (
		14.60		-	1				-	-	man			States Miller
	-	4,70	-	Januar.	10.00	1.4	-			-	man	10,7990,00,7	40,0098,03,000	
	- water	10,000		المتحدث	1.000	11.14			1410	1494	and t		Could Count	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
-	of last	TAX NO.	1000	Common (	Cashiel	1004	the second second	-	10.00	24.84	Case of Case	Address of Taxable	NAME AND ADDRESS OF	Supplement 1.
	1000	19,211	-					_		44.01	-			
	-	4.50		10000	-		-			44.64	angel	ari 14940.071.760	ad howed in case	wheth is provided in a
	1000	14,700		(anna)	-				-	10.01	and a			Bell SLEAD
	-	-4.20		10000	-		in a second				anar.	art 10740, 011, 000	altimate i pa	Top support
	-	44,000	-	( Longer )	1	1.00			-	anter	-			Manager Britshing pl. (.m.)
		-	-	-	-		-		-	10.00	-	10.0000.0.00		Survey States
		4.58	Apres 1						-	44.01	anar.			
	-	-1.20	-	-	-		-			warded.	anar.	00.0000.00.000	\$4.79Mpt;4.1200	Contraction of the second s
		10.00	-	-	-	1.2			1000	****	anar 1			14
	-	10,000		-	-	1.0	-		-	and the second			-	
	inima.	10,000	-	-	-				-	****	and a			Come .
	-	10,000	1.0000	-	10.44		-			mand		accessory.	100,1098,04,2,000	
		10.000	-	ineres !	-	1.0			-	an at	anar -			1.1.2.2.2
	-	4.60	-	ineres.	-	1	-			-	-	dari Jamma ak J		
	1.000			-	-	1.2				-	-			-
	-	4.50		-		1.2	-		-	-	Anger	accession.al.a	44,10988,01,109	-
	Contract of	10,000	-	-	-				-	And an	-			and
		4.25	-		-		-		-		-	04.1898.04.2	44.1048.01.000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	1000	10.000	-	-	-	1				-	-	100000000		

Bäumer Mattress Nest order list

#### **BÄUMER MATTRESS NEST AT A GLANCE**

#### Use

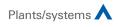
- For automatic mattress and sheet production
- Can be used for short blocks as well as for long blocks

#### Features

- Importing of mattress orders for daily or multi-day production
- Planning of all required mattresses and sheets with various qualities and measurements without overproduction and without warehousing
- · Filling of blocks with other orders or filling sheets
- Program gives warning of excessive cuttings with inefficiently filled blocks. In this case, these parts can be shifted to the next nesting
- 3-dimensional preview of block utilization
- · Special nest algorithm guarantees optimum material utilization
- Quick and prompt planning is possible
- · Short blocks are optimally planned in the long blocks, so that cuttings are reduced
- Long block scraps can be filled with standard short locks

#### Feedback to the ERP system

- Importing of bin status reports (high-bay racking, long block warehouse, short block warehouse)
- On-the-fly data feedback of planned and cut production
- Complete production feedback. Damaged blocks and parts, for example due to incorrect foaming, are shown separately



# MATTRESSNEST

#### Customer benefits

- Automated and efficient production planning
- Quick preparation of production with minimum manpower
- Automatic production process
- Less personnel for planning and plant operation
- No manual intervention in production required



#### ADD VALUE WITH ...

## AUTOMATED HANDLING SYSTEM FOR THE PRODUCTION OF MATTRESSES

#### AUTOMATED HANDLING SYSTEM

- Process optimization
- Cost reduction
- Waste avoidance
- High flexibility with mixing products

For many producers of mattresses, the subject of automation has gained enormously in importance and has become much more than a trend. "In the high-tech market of labor-intensive countries, the trend is leading to higher output through increased process optimization. Not only have the demands made on precision and simultaneously short lead times increased but larger levels of flexibility are now required", explained Jan Leisse.

The number of mixed productions for making spring mattresses and foam-filled sandwich mattresses has also increased and has posed handling and adhesive application technology with new challenges.

Bäumer demonstrated this at the Interzum 2017 using a new handling system, which impressed visitors. The OFS Twincut horizontal contour cutting machine was displayed in combination with the Lamit HM bonding machine. The Lamit HM is primarily used for the production of inner spring mattresses. By adding to the various options, Bäumer showed how it could also be used to produce foam sandwich mattresses. A robot can be deployed between the two machines.

#### Automation generates added value

Each part of the production line has its intrinsic advantages which together create extraordinary added value for more flexible and costefficient production. No manual handling is required and therefore the quality is higher. This handling system avoids waste and the material can be used more efficiently.

#### OFS-Twincut Contour cutting machine

This machine is available directly with two functions. One option is its use as rotating knife for cutting upholstered parts and mattresses quickly; or alternatively it can be used as an oscillating knife for cutting high-density materials. The oscillating blade provides a more precise cut of intricate mattress sections. Both options combined in a single cutting unit to provide increased flexibility.

#### Adhesive application unit Lamit-HM

In the classic production of spring mattresses, the makers primarily opt for the hotmelt process for bonding the mattresses. This is because a variety of fibrous and non-fibrous materials are used in the making of spring mattresses thus practically predestinating them for the non-contact hotmelt application of adhesives.

Foam-filled sandwich mattresses on the other hand are usually bonded with a dispersion adhesive applied using a roller. Therefore, if both options are required, then it will normally involve two processes and two different machines. The Lamit-HM, a classic hotmelt machine has been modified with technical innovations and options to permit its universal use in mix production processes.

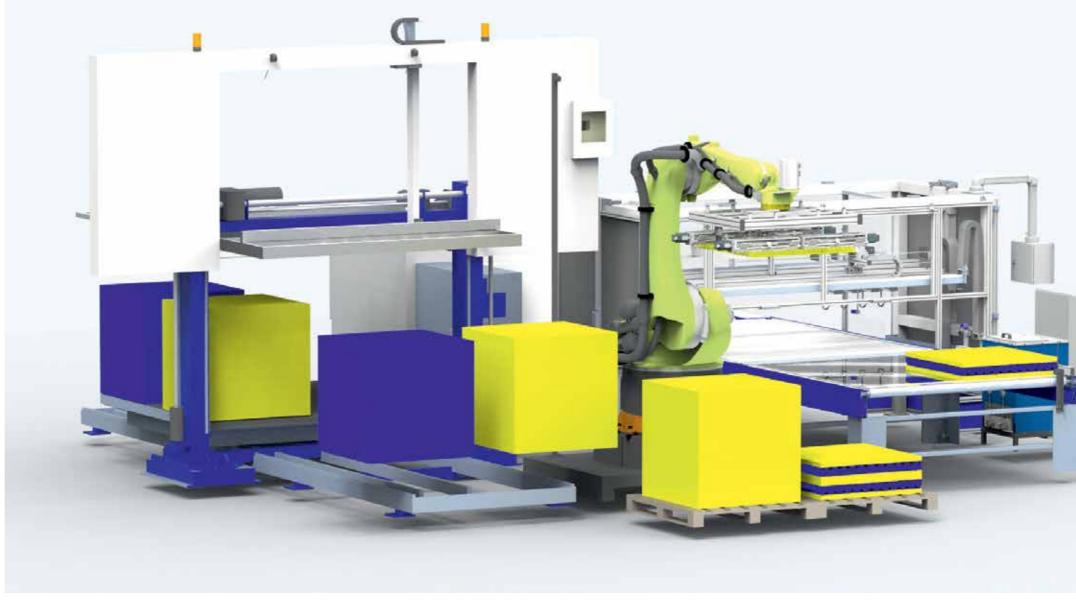
The Lamit-HM features motor-controlled adhesive dispensing heads allowing freely-programmable applications. Its additional benefit is high because, whatever the product – sandwich mattress or spring mattress – the surface coating is freely programmable regarding the connection point and the width position. The oscillation and intermittent function Palettier-Roboter opens and closes the adhesive dispensing head at freely programmable points and needs up to 30% less adhesive. A further plus is the automated return function which reverses the layers and sandwiches fully-automatically. No manual handling is required.

#### Palletizing robots

In many factory buildings, robots are already proving their capabilities. At the Interzum 2017, Bäumer demonstrated a handling robot that was deployed between the two machines mentioned above. In real world use, this robot would be positioned differently to fit the process. After contoured mattress sheets were cut with the cutting machine, the robot transported the individual sheets of the block directly to the bonding machine. There, the sheet was positioned precisely with no offset. A camera and laser system controlled the robot. A bonding application was applied to the first sheet, and then the robot placed the second sheet on the first one. This process was repeated until all sheets were glued to form a sandwich mattress.

A variety of depositing and stacking machines are used conventionally but this robot can do so much more. Because of its rotating function, it can handle several stacks in a variety of materials. The production line can therefore be equipped with 5-6 different material positions.

The robot's arm features a needle gripper. The gripping mechanism is available either with a pneumatic drive or a servo drive; the pneumatic version is designated for up to two layer thicknesses, and can been





programmed as desired. The invertercontrolled servo drive provides a more flexible use where a variety of different layer thicknesses are to be handled and allows any number of exactly defined penetration depths of 10 mm and more.

#### BÄUMER CUBE - 3-D NESTING SOFTWARE FOR CUBOIDS

## OPTIMUM WORKFLOW FOR VERTICAL CUTTING MACHINES

Although a vertical cutting machine may seem to be a straightforward device, it is quite a complicated tool to operate. The machine operator is confronted with the task of optimally nesting various sizes of rectangular blocks from many different orders in diverse blocks while producing as little waste as possible.

Then these cuboids have to be cut from the block in a time-saving sequence.

The job also includes sorting the orders according to different material qualities, colors, etc. as well as marking any residual blocks that are produced.

Complicated nesting from many different orders, as shown in the example here with Cube, can only be performed by an operator who has an excellent capacity for spatial thinking and can anticipate the next steps as in a chess game.

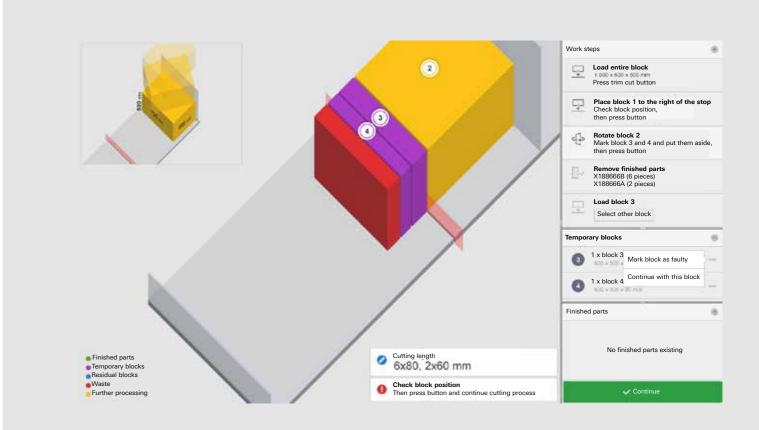
Therefore not only good planning but also an outstanding capacity for spatial thinking and logics is required for

processing a daily production on the vertical cutting machine. The efficiency and quality of the process depend heavily on the operator.

The solution for fast, forward-looking planning, constant quality and minimum expenditure of time is Bäumer Cube software, which nests the orders three-dimensionally with a special nesting algorithm and ensures optimum block utilization. Usually this step is performed by work preparation staff.

The special challenge our software programmers had to meet with Cube is the combination of automatic and manual processes. Compared to a CNC machine where cutting programs are sent to the machine and are processed fully automatically, only sub-processes can be automated with PLC control on a vertical cutting machine. For example, partial blocks have to be manually removed from the machine now and then or rotated around an axis before the workflow is continued or, in other words, the next step is done.

#### The software guides the worker step by step:



Orders are nested three-dimensionally. Thus, the block is optimally utilized. First Bäumer Cube specifies which block to use and how to position it on the machine. Then the block is cut. Initially, all the cuts which are possible according to the current orientation of the block are carried out.

Afterward, Bäumer Cube indicates whether the created partial blocks are finished parts, residual blocks, waste, or temporary blocks for further processing.

- Finished parts are assigned by Cube to orders or commissions so that the operator can remove, label, and store them.
- Residual blocks are provided with a clear identifier and back posted to the stock.
- Temporary blocks are still required in the further course of the cutting program. They are also provided by Cube with a clear identifier, stored temporarily, and repositioned for the next steps according to the specification from Bäumer Cube.



# B'A'UMER**CUBE**

Every instruction from Bäumer Cube must be confirmed by the operator by pressing the button on the touch screen before the next step is specified.

## The purpose of Bäumer Cube visualization is to provide clear instructions to the operator.

In a simplified model of the machine, the position of the knife and the stop as well as the positioning of the block are shown in relation to the machine. In addition, the edges of the block are measured and it is clearly indicated whether the edges need to be trimmed.

#### Features at a glance:

- Preparation of cutting jobs in the work preparation department
- Optimum block utilization thanks to clever nesting algorithm
- Operator-specific parameters can be stored
- Feature for estimating the cost of the individual cut part

- Bäumer Cube is network-compatible cutting jobs can be selected by the operator via a client PC at the machine on a large screen
- Specification of optimum workflows
- Clear instructions to machine operator thanks to clear visualization
- Marking and debiting of finished parts and finished messages

- Integration into the control of vertical cutting machine IS-M for automatic processing of instructions from Cube, such as stop positioning, setting quantity and cutting thicknesses, or performing the cutting job
- Cutting errors can be communicated to the system, and parts planned from the (partial) block are automatically sent back to the order pool
- Identification of identical finished parts within a block and request to remove entire layers

## WITH BÄUMER CUBE A COMPLICATED NESTING OF VARIOUS ORDERS BECOMES A BREEZE.

Volker Czymek, Senior project manager

#### Highest possible efficiency increase thanks to integration of Cube into the control

Basically, Cube can be provided for any vertical cutting machine. The operator enters the dimensions specified by the software manually and individually in the control, adjusts the stops, etc.

It is, however, a quantum leap in efficiency enhancement when the work steps specified by Cube are automatically performed by the machine.

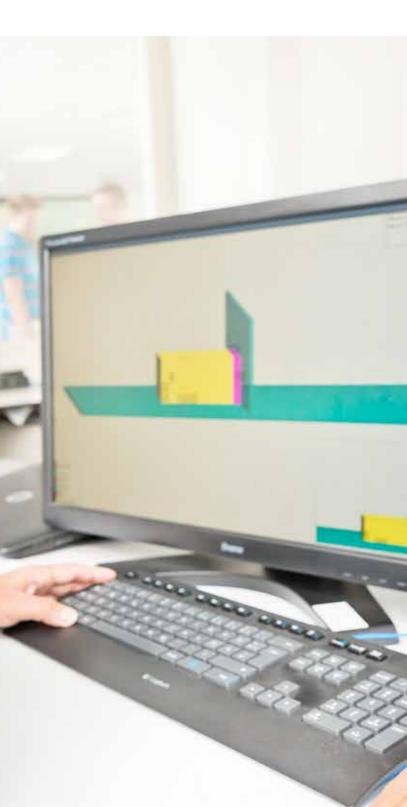
of vertical cutting machines IS-M, on sale starting in May 2017. The cutting process takes place automatically, allowing for materialdependent cutting parameters such as cutting speed. Cutting progress and, finally, cutting end are displayed on the IS-M. Finished parts are visualized and labels can be printed.

This total integration of Cube is now available in the new generation





- Consideration of block edges (side, upper and lower skin or untrimmed edges)
- Label printing for marking finished orders, residual, and temporary blocks
- Integrated residual block management
- Log data as MDE data (BDE)



#### ABLG-1 CUT-TO-LENGTH MACHINE

# **NOW EVEN MORE PRODUCTIVE**

The ABLG-1 is being used to cut blocks to length after foaming. It was developed in the 1970s. This machine's basic function is still keeping up with the times. Over the years it was adapted to meet stricter requirements. For instance, the finger conveyor was replaced by the roller conveyor, which is much easier on the freshly foamed blocks.

Bäumer worked on improving the ABLG-1 in order to meet current customer needs with regard to higher productivity.

#### Higher productivity

Two new features have increased its productivity. One is that now short rest pieces can be better transported using a rigid chain by which all rollers are driven.

The other is the ability to cut from the bottom to the top so that the binding that guides the knife does not get stuck or clogged. This feature guarantees consistently good quality cuts.

But there's even more...

#### Simplified machine operability

The knife tension and grinding unit are now on one side so that the operator can work much more comfortably. In addition, the motors for the height adjustment and travel have been mounted on the outside for easier maintenance.

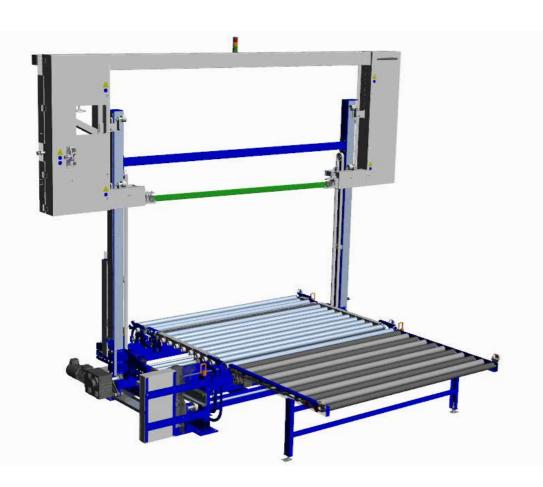
#### New ABLG-1 is 740 mm shorter

This is a 20% reduction in length and saves space in the machine shop.

#### **Reduced costs**

The ABLG-1 is now much more compact. This saves on freight costs. The modular design and moving the axis drive to the outside reduce on-site installation and service costs. With a foaming speed of up to 2 meters per minute, the energy efficiency has been improved by the three-phase drive with 120 Hz technology: a smaller motor with a higher transmission ratio.

The redesigned ABLG-1 is available upon request.



#### **B-TRACE**

# **RELIABLE FAULT** DIAGNOSTICS

Detect the fault, determine the cause, rectify the fault: Your network is only used as a transport route; undesired in simple structures, the reason for a defect in or even access to the factory network is completely blocked. failure of a machine can generally be guickly found and An integrated firewall and encryption of data provide

operational capability restored immediately. added security for the connection. The https connection is In complex, integrated systems, however, a technical cause detected automatically by your system. The security settings

often cannot be immediately assigned to a fault. Particularly in the event of faults that occur irregularly or do not occur at all over longer periods of time, diagnosis is frequently complicated and difficult to predict.

B-Trace is a Bäumer service product that facilitates the diagnosis of your system even in difficult cases, avoids costs when searching for the cause of a problem and helps to minimize machine downtimes.

#### Tracking down the fault: continuous monitoring using a data logger

The core of B-Trace is an industrial box PC, which is equipped with special software and installed in the control cabinet of the machine you wish to monitor. The computer is connect- B-Trace: reliable technology for fault diagnostics ed to the machine control system by



means of a PLC interface, and records all process and operating data of the machine permanently and if necessary over a longer period of time, and saves these data.

As soon as the fault you are looking for occurs, the data measured at that point in time can be evaluated and the cause reliably determined.

#### Fast help with B-Con remote maintenance

Machines fitted with the B-Con remote maintenance system allow a service technician access - directly and at





any place in the world. This means that when the fault is found, either it can be rectified immediately or its rectification can be prepared specifically, so that the full performance of the machine is restored as quickly as possible.

For data transmission using B-Con, Bäumer complies with the same high security standards that are implemented by banks or professional online shopping sites. Using an external key switch on the machine control cabinet, you as the customer can initiate the creation of the VPN tunnel.

in your customer network do not have to be changed. Time-consuming configuration is not necessary.

#### Can be used for many brands of machines

B-Trace can be connected to almost any Bäumer machine delivered since 1998, as well as to almost every Lamit machine, but data streams from the machines of other manufacturers can also be recorded.

For more information about B-trace, our Service Hotline Director is available. You can phone

Stephan Christ Phone: +49 27 34-289 - 377 E-mail: stephan.christ@baeumer.com



BÄUMER 4.0 - FOR KPI-BASED AND EFFICIENT PRODUCTION MANAGEMENT

# NEW NETWORKING PLATFORM UPGRADES **BÄUMER'S DIGITAL SERVICES**

We assure the future of our customers by deploying customized engineering and intelligent services, and amalgamating information systems with the production level.

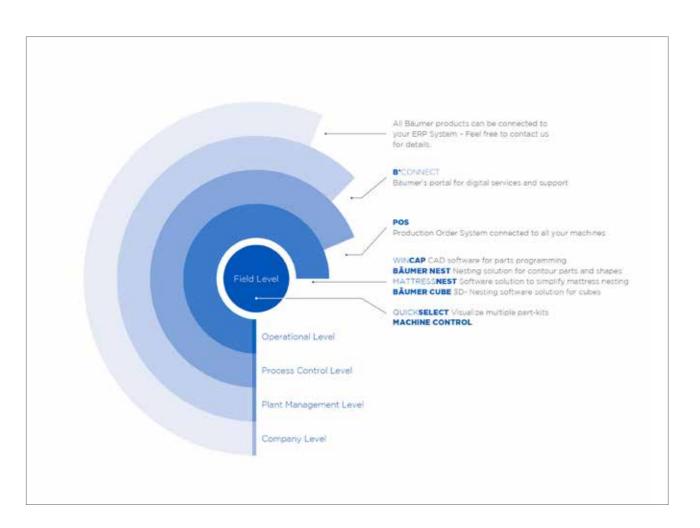
We aim to incorporate all of the people, machines and processes involved in the value-added chain into one network through digitalization and automation.

The networking of machines is a basic condition for the development of digitalized, automated processes in modern production. Production plants become more intelligent and have smarter control functionalities allowing more effective and more flexible reactions during the production process.

For many years, Bäumer has been developing and upgrading a variety of automation and control modules for use at various corporate levels of the foam production industry in the control and networking of many different processes.

The automation circle - the so-called system highway shows how information is passed on. The digital Bäumer portfolio is represented at various levels.

When our customers network their machinery and operative functions with digital Bäumer products, they can reckon with higher value at all points along the value-added chain.



Foam producers and foam processors have been battling for many years with increased pressure on efficiency, higher throughput times and reduced costs. In order to reach the required rates and to maintain a leading position in the industry, a trouble-free production process is essential. Simplified and quick processes which control production are elementary.

#### B+ Connect: Four modules to support customer processes

Bäumer is taking the next steps towards digitalization with the B+ Connect driver (Bäumer Plus Connect), which will result in a new platform for future product lines to bring digitally networked machinery and operative functions to a new level.

With initially four modules Bäumer will be supporting its customers in their direct day-to-day busines

#### Modul 1: B+ Focus

Not only the production and maintenance staff but also the product manager and management must keep an eye on the machines, plants and production in real time. The







preparation of key figures creates a rapid overview of daily business and facilitates control - wherever and whenever necessary, via smartphone, tablet or laptop.

The current condition of the machines can be optimally monitored and visualized. The capacity and efficiency of the machines are shown as well as the complete picture of all machines on an international level in all locations in Germany and abroad.

- Identification of OEE (overall equipment effectiveness)
- Display of dead times and causes
- Monitoring of technical assemblies
- Retrievable maintenance log for each machine
- Available information on the state of each machine

	82.45 5 82.46 5 89.51 %	
50	ZU805 #54	\$
%	81.9 9	6
80.4 %	🕑 Availability	89.88 %
91.16 %	Efficiency	87,16 %
94.74 %	Quality	90.48 %



#### Modul 2: B+ Support

Customers with a problem can now be helped specialist is able to see exactly what the machine operator even more quickly now. The machine operator uses B+ Support to send a service message manually or, as an alternative in certain pre-defined cases, the machine triggers an alarm independently. Both reach the Bäumer Service immediately.

The specialists at Bäumer are connected directly with the customer, either to provide a service or to defuse a critical situation. For example, the settings in the machine control can be checked by means of remote maintenance and problems can be remedied online. Customers can also chat with the Bäumer specialists • Reductions in process costs or hold a webcam conference. If the machine operator puts on his head-mounted display, the Bäumer

sees and can look "directly into the machine". This means that on-the-spot support rules out any misunderstanding when describing the defects orally, faults can be identified and gualified solutions guickly found.

- Fast reaction time
- Reduction in number of machine downtimes
- Time savings at machine start-up

#### Modul 4: B+ Shop

a button. The Customer Cockpit easily recognizes wearing parts and spare parts, which can then be ordered directly. The B+ Shop can be used via a role concept at different • Automated ordering process levels with various rights in the ordering system.

Orders can be placed directly at the machine or centrally in the Procurement department.

#### Modul 3: B+ Maintain

Maintaining and servicing machinery is now even easier. All of the maintenance activities required are sent directly to the operator via a role concept (access control) or registered with the central maintenance department. The operator has a constant overview of which activities are due at a certain time or perhaps are already overdue. Each item of maintenance work is documented and can be tracked at all times.

Instructions are displayed for certain maintenance jobs so that the operator not only sees what he must do, but

also how he must do it - without having to leaf through any documentation.

- Condition-based, predictable maintenance
- Improved information on the requirements situation
- Plannable maintenance measures





- Relevant parts can be procured automatically at the touch of Simplified identification of spare parts minimizes incorrect orders

  - Complete price transparency

# **B**+CONNECT



GERMAN/CHINESE YOUTH EXCHANGE



China's economic growth over at least the past three years has astounded the world. China is a lucrative business market for German companies, which is why it is even more important to internationally operating companies that exchanges take place between the people from the two cultures.

Bäumer is participating in a German/Chinese exchange program offered by the Akademie Bodensee (Lake Constance Academy).

Joint workshop to share different values

Chinese youth are developing a workshop at the academy together with German trainees. There, the participants will present their respective countries and ideals. The goal is to talk about these and develop an understanding for the respective "differentness". Based upon this discussion of values, a sustainable organization will be developed using the future workshop method as a model.

Two Bäumer trainees will attend the workshop: Michelle Rinsdorf (electrician apprentice) and Hagen von Jagow (systems engineer apprentice). The seminar will be held in English, providing a good opportunity to put the learned language to practice. The program will end with visits to the companies and families of the young Germans.

#### Reciprocal visit in Qingdao

At the beginning of November the trainees will then be involved in a reciprocal visit and travel to Qindao in order to obtain initial impressions of daily life there and to participate in a comprehensive program.

The trainees will visit institutions, companies and the technical college there.

## START OF TRAINING 2017 CAREER WELCOME



From left to right: Tobias Euel, Max Leon Gierhake, Memet Usta, Maik Weber, Simon Klappert, Marc Jenneches, Tom Ludwig, Nawaphon In-Urai, Max Milosevic, Sven Heinrich Henner Groß, Simon Lukas Nöll.

SIEGEN VOCATIONAL TRAINING FAIR

# ACTIVE CAREER ORIENTATION AT BÄUMER EXHIBITION STAND



The training fair in the Siegerlandhalle center offered two exciting days to both the Bäumer team and the many pupils and students who learned about beginning career opportunities.

They used these fair days to learn about different occupations and to make general contact with local companies. Bäumer was extremely popular, since word has gotten out about the company's good training opportunities. This past year alone Bäumer invested approximately 100,000 euros in a new electrically operated training shop. After all, Bäumer considers training its next generation of workers as extremely important.

#### Technical training jobs in demand

"This year the interest in technical training jobs is particularly high. I enjoy working with young people and sharing my knowledge. They are like sponges just waiting to soak up knowledge," said Rudolf Jung, electrical operations training manager.

#### Fostering talent

Andreas Bendel, mechanical operations training manager, was enthusiastic," Some pupils had fixed ideas about what they would consider enjoyable. Others were more curious than anything and sought advice about their interests and talents. Unlike last year, many young people were at the fair with their friends and left their parents and grandparents at home." Bäumer provides training in a large number of occupations: technical, mechanical and industrial.



#### Internship offer after fair visit

"We are thrilled when pupils are well prepared for the training fair and immediately submit their application at the fair stand. It is especially nice that we are able to offer two training fair visitors an internship at our company," said Petra Giesler, HR manager at Bäumer. The pupils were particularly interested in internships abroad, which Bäumer offers during the training period and which provide excellent opportunities to prepare for testing. "We also like to offer schools the opportunity to visit our company with their pupils in order to gain insight into the working environment. We used the training fair to inform pupils about this and to establish contact with them. '

#### Responsibility and perspectives

As a contribution to long-term quality assurance and especially also out of sociopolitical responsibility to young people, Bäumer has been providing training since 1946 and has become well-known for its training programs. Bäumer employs on average about 50 trainees a year, which accounts for about 15% of its total workforce.







BÄUMER CONCLUDES COOPERATION AGREEMENT WITH FREUDENBERG COMPREHENSIVE SCHOOL

# SCHOOL AND BUSINESS TEAM UP

Social commitment in and for the region of South to recognize their strengths and perhaps even awaken Westphalia is an important issue to the people who live here and the companies that are based here. All the better when two parties are found that get involved and have now started cooperating with each other – Freudenberg Comprehensive School and Bäumer.

In mid-February, the cooperation agreement was signed by Petra Giesler (Head of Personnel at Bäumer) and Michael Albrecht (Principal).

Bäumer has set up a technical project specifically for 8th grade students as part of a student project week. In the technical training workshop at Bäumer, students have the opportunity to try out constructing something as student apprentices.

This is just one of many projects which both partners want to do together in the future, with a focus on drawing young people's attention to career prospects. "People need mutual support and cooperation. That starts in the family and continues at school and at work," says Michael Albrecht, Principal of Freudenberg Comprehensive School. It is important to him that his students learn more about real-life situations and receive some vocational orientation and guidance at an early stage.

"We want to meet our social responsibility and offer young people future prospects. Through the offered project week or an internship, we aim to give students the opportunity

passion for a profession in them. Both sides can profit from the cooperation: The students get an impression of Bäumer and we try to find and promote talents. In addition, we want to support the students with job application training," says Petra Giesler, Head of Personnel at Bäumer.

The main area of training at Bäumer is focused on the industrial sector. "Approx. 40% of all student apprentices also complete a training program at our company afterward," says Andreas Bendel, Head of Industrial Training. Last year Bäumer invested roughly EUR 100, 000 in high-quality fittings for a new electrical training workshop, which is exceptional for a company of this size.

However also in the commercial and technical area or in the form of a cooperative study program, Bäumer also wants to get young people interested in the company and support the region at the same time.

A cooperation agreement with the Freudenberg Comprehensive School is bearing its first fruits. For one week 13 boys and girls visited the Bäumer apprenticeship shop and "tinkered" together with instructors Rudolf Jung and Marco Hekter. The goal of the project was to give young people a better understanding of skilled manual work and the joy that comes with it. The two instructors chose two unusual projects. Marco Hekter built solar planes with seven boys, while Rudolf Jung made an electric cube with four girls.

The two projects required manual skill, and gave the young people an opportunity to try their hand at them. Some of the boys mastered the task so well that Marco Hekter was immediately able to authorize an additional internship for them. "These boys grasped things quickly, showed great

# FIRST PROJECT WEEK WITH **PUPILS FROM FREUDENBERG COMPREHENSIVE SCHOOL**







interest and were completely motivated. They were also really clever. I like it when I meet talented young people whom I may possibly meet again later as trainees." He could tell that they had potential right from the start.

Rudolf Jung had a similar situation with the girls. "The four girls really impressed me. Everything ran like clockwork and went really smoothly," Rudolf Jung said enthusiastically. The electric cube was created in different sub-steps. The girls used drills, screws and soldering equipment to build and finish the cube. They figured out very guickly what to do and how to do it. Rudolf Jung would really like to see the girls eventually as trainees in the electrical workshop.

#### WE PROVIDE TRAINING -

- Industrial mechanic Field of study: plant and machine construction
- Machining mechanic
- Electronics technician Field of study: plant technology
- Electronics technician Field of study: automation technology
- Plant and machinery operator
- Mechatronics technician
- Industrial business management assistant
- Warehouse logistics specialist
- Technical product designer

# **BÄUMER AWARDED CERTIFICATE AS "FAMILY-FRIENDLY COMPANY"**

Nina Patisson was obviously delighted to receive the newly-introduced certificate from County Commissioner Müller.

The County Commissioners Andreas Müller and Frank Beckehoff sent out invitations to the award ceremony which was held on the premises of the communal center in Olpe. The event was moderated by project manager Kristina Kraft from the Kompetenzzentrum Frau und Beruf (a competence center for women and employment) for the Siegen-Wittgenstein region.

Bäumer's efforts in the past months have been well worth while. And now, Bäumer has it certified in black and white which is one of the most attractive employers in the regions and has been able to implement further projects in addition to the existing policies for family friendliness. The company places a major emphasis on the compatibility of family and work. The topic is also a personal concern of Nina Patisson and one to which she is resolutely committed. "We have realized that when employees are content and living in a balanced life-work style, they work more efficiently".

Consequently, Bäumer was the first company to rise to the challenge and register for the arduous certification process. A further nine companies followed suit after the kick-off event in September 2016

#### The certification process consists of 5 phases:

- Selfcheck: documentation of the company's existing family-friendly personnel policies was checked by the jury
- Individual phase: Further development of measures for family-friendliness
- Networking phase: consolidation of corporate organizational opportunities by way of workshops and networking with other SMEs
- Jury session: Measures are presented to the jury
- Award of the certificate

"It is essential to keep the needs of each and every staff member in mind. That might be, for example, allowing flexible working hours to support childcare or care of relatives", explained County Commissioner Andreas Müller. The certificate also serves as a seal of quality when recruiting skilled employees. "We are supporting this project together with our other partners because the certification is an important step in image creation in the region. We have here many attractive companies which now have the opportunity of documenting their familyfriendly policies" added County Commissioner, Frank Beckehoff.



COMMENTARY

# **ENJOYING LIFE IN THE COUNTRY**

There are some cities where I have ended up because of my job choice. I really liked working and living in Aachen, Düsseldorf and Essen. I enjoyed the energetic life after work: picking up "just one more thing" in the pedestrian area, getting together with a colleague for a quick drink after work or going out to dinner with friends. Iranian, Lebanese, Spanish, Italian or Mexican food? No problem. And the kitchen was open until 1 a.m.

For just over a year I have been working at Bäumer and I have been thinking about giving up commuting and moving here from Cologne. The feedback I have received

from my family and friends has varied greatly. "Where is Freudenberg? Do you have to know?" or "...country life for us and the children would also be quite nice." Can I rediscover my passion for country life? After all, I was born here and just have to remember the past...

Right outside the door I am faced with the weather – pristine and clear. No smog, no fumes and no smell of exhaust either. Just rain, sunshine or something in between. You can feel the change in seasons. In the spring flowers are planted everywhere, and Saturday is lawnmowing day. The first after-work beers are enjoyed outdoors. Then in the summer everything takes place outdoors. The barbecue season begins. Butterflies and bees frolic



everywhere. Autumn days in the country are the most beautiful I know. The golden sun above the colorful autumn forest. How beautiful.

Things look totally different in the city. Spring and summer peaceful greenery from outside has continued within me. are pretty much the same. There isn't really a barbecue season, because you're not allowed to barbecue on small But sometimes I don't want it to be so quiet. Even then I have a choice. There are a large number of events: concerts, balconies, nor in city parks. So I take the train to the overcrowded beer garden and can no longer find a seat festivals in the historic part of town, markets, museums and in the shade. Autumn and winter here are not just gray. special exhibitions. And don't forget lively club activities. They are dark gray. My umbrella always bumps up against A lot of opportunities are available to children, sports enthusiasts, gardeners, hikers, day-trippers, animal lovers other umbrellas in the pedestrian area. And when the sun and party-goers. Just 15 minutes by car and you can find is shining, it's beautiful, but only because it happens not to be raining at the moment. I get an ice cream, because all the culture-related activities such as theater, concerts the ice cream shop is even open in the winter. and the cinema. However, you need a car in Freudenberg.

In Freudenberg children are still playing in their yards, on playgrounds or even on the street, because it's easy to see traffic. It's logical for you to brake automatically if you live on that street. In the city the main road is right around the corner, and the next playground is...where again...? Meanwhile, I've made up my mind: I will move back to the region and see what else life in South Westphalia has to offer. I'm looking forward to it. Christina Fuß, Marketing Manager



The neighbors all know each other and everyone looks after the kids a bit. Of course gossiping goes on, but people also help each other out and are there for each other in an emergency. The functioning neighborhood helps with babysitting, driving to the hospital, and the nice retiree next door occasionally also repairs broken-down bicycles because he doesn't have any grandchildren himself. He also does not get angry when at times the children are loud and play in his yard.

Country living is actually a great subject. Usually the apartments are a few square meters larger for the same

price and you also get your own yard. You get more bang for your buck. You can plant your own fruit and vegetables, and the kids can finally have a cat and are happy when they see a "real" cow. The visit includes a private guest room and the basement is usually rat-free, which is not always the case in old buildings in Cologne.

The children quickly find new friends, since many of them go to the same school. Over a short or long period of time, the mothers get to know each other, go to yoga together and switch off taking care of the children. This is great. People just plain know each other.

It may be boring somewhere, but certainly not in Freudenberg and its surroundings. It's not boring in the

slightest. There are countless opportunities for sports, some of which are particularly fun because they take place in the natural surroundings. Everything is more green than gray. The pace of life is slower overall. It's as if the peaceful greenery from outside has continued within me.

#### NEW HEAD OF BAUMER OF AMERICA

# WELCOME UWE SCHARFY

#### He is very personable upon first impression. How could he be anything else? After all, he was born in Siegerland.

At the age of 17 he had already developed a taste for travel and discovered his liking of foreign countries and cultures. He went to the U.S. as an exchange student and at the time said,"...this won't be the last time I visit. I'll be coming back." And he did.

#### Apprenticeship at mechanical engineering firm

He started with training to become an industrial business management assistant for the engineering firm Heinrich Georg GmbH in Siegen. This early employer quickly recognized his potential after the apprenticeship and sent him to the U.S. subsidiary to establish services there. Uwe Scharfy gladly accepted the challenge because he enjoys being challenged and tackling his tasks. He climbed the career ladder with resolve. First he took on the role of General Manager, then he became Vice President, and finally he became Chief Financial Officer (CFO). At the same time, he studied business and minored in accounting. He has a practical background and has expanded his knowledge by studying the basic principles.

#### Working in a family-owned business is great

He definitely wanted to embark on the next step in his career in becoming a Chief Executive Manager (CEO), and thus Managing Director, in a family-owned business. Structures are flat and decisions are made guickly in this type of company. Everyone knows each other and people aren't just numbers like they are in a large company. You quickly become part of the "family". The sense of community here is palpable. This is important to him and was something he immediately liked about Bäumer. Another bonus as a result of his decision to join Bäumer is the healthy balance between years of experience and creative, youthful dynamics. "These are good prerequisites for innovative growth in the future," says Uwe Scharfy (41). At the same time, he also feels the responsibility that comes with the new position. After all, as a subsidiary, BOA is one of the largest and most important markets for the foam industry.

#### Open door and a willingness to listen to all colleagues and staff

By their own admission, the BOA colleagues welcomed him with open arms. "It was really great and I could also immediately feel the harmony in the team. They all work very well together." His door is almost always open and his staff know that they can turn to him any time and he'll be there for them. He is a loyal person and everyone who has ever met him can tell. "I stand by my team and I always listen to all sides. I have an acute sense of fairness, which always results in good compromises."

#### New industry - new customers. That's exciting.

An interesting time is starting for Uwe Scharfy. The foam industry is a new industry for him, and it is exciting to learn about what makes the customers tick. Bäumer has a wide range of machinery, and the technical complexity is challenging. He especially likes the intercultural environment at BOA. Working with people with different cultural backgrounds makes it particularly interesting and exciting. This is why it is so important to him to work in an internationally active company. Better yet, he is now actively involved in the future growth of the Bäumer Group. What was particularly impressive were the initial results with Bäumer customers. "It's great to see how many customers are Bäumer fans to the core." They don't want anything else. They value the premium product and absolutely want a Bäumer machine, made in Germany, in their workshop."

#### Further expanding their market position

In the U.S. everything is done with less red tape. The focus on service is a notch higher than in Germany. "In the U.S. people experience good service in person. For example, I was in a restaurant and the wait was long. I got my food for free as a result. The goal of most American companies is customer satisfaction under all circumstances."

His goal is to further expand Bäumer's market position and brand and to strategically adapt to the growth in recent years. He has ambitious goals and is developing growth strategies. This also includes the advancement and further development of the BOA team. He sees the parent company and the BOA subsidiary as one large team. "Through close cooperation we can take advantage of our synergies and strengthen our market position. '

"I cannot live with boredom"





Challenging tasks drive him and he likes that. Boredom is not for him. He is athletic and needs that as a balance to his job. In Germany he played handball. Now he skis and enjoys skiing on very difficult ski slopes because he loves speed. He also exercises at a gym and doesn't have time for more.

He needs to get away for vacation. He likes to meet new people and learn about new cultures. This is part of his nature and the reason why he lived in China for a year after his studies to manage a subsidiary there. After that he backpacked for several months through Asia and Australia. When asked what has impressed him most in his travels, he says: "It is amazing how much poverty there actually is in the world and how different you feel when you face it close up. This has influenced my perspective significantly." But he also mentions unique experiences in nature, such as in Bali/Uluwatu. There he spent hours sitting on a cliff and taking in nature.

We say, "Welcome to the team."

# **BÄUMER FANS TO THE CORE. ANYTHING ELSE AND VALUE**

#### Jens Raupach (26), Wilnsdorf

He is breathing new life into our company figures in Managerial Accounting. Right from the start he became intensely involved in the ERP project. It is both important and exciting, because this is where accounting information is generated. When the system is running, his range of duties will be diverse, since in addition to operational sales and production accounting, which to him is where the action is in the organization, strategic aspects and new projects will also come into play.

> A lot of confidence has been placed in him and his performance, and people value his opinion. "This is anything but self-evident for a 26 year-old rookie controller," he himself says.

> > He would like to have Managerial Accounting be viewed as having an advisory role. His job is to provide added value for all decisionmakers so that they can make good decisions.

Christian Roth (33), Wilnsdorf

New Product Development member Christian Roth works in Product Development as an electrical design engineer, where he is responsible for our machines' wiring diagrams and for developing production parts.

He completed his degree studying electrical engineering at the University of Siegen, with an emphasis on automation.

During his studies he was a member of the University of Siegen student racing team and worked with combustion engines and electrical drive systems for the development of race cars. His work at Georg Automation GmbH in Kreuztal as a software developer and commissioning foreman for belt conveyor systems and machine tools helped him land his current job at Bäumer. He plans to contribute to Bäumer's success with the experiences he has already gained. He considers optimizing machinery and systems/plants particularly important.



#### Christoph Hermes (26), Windeck

Christoph Hermes' path to Bäumer was straightforward: straight from the university to us without major detours with a Master of Science in his pocket. During his mechanical engineering studies he gathered experiences as a scientific associate, completing a bachelor's degree at the Institute of Fluid- and Thermodynamics at the University of Siegen.

Today he is a member of the development team. His goal is to optimize horizontal contour cutting machines. For example, how can you economize on material? To do this, he looks at different machine components that can be simplified using analytical models.

He is particularly interested in simulations using our machines. The tensioning and sliding of bearing structures can be viewed similarly to how a doctor can see your bones in an X-ray. He puts the machines through their paces.

The findings are helpful in identifying potential savings in production costs.



#### Thomas Küther (28), Netphen

Thanks to Thomas Küther, who handles our payroll accounting, the money we've earned promptly ends up in our bank accounts at the end of the month. As a member of the HR department, he treats staff and management the same. Applications that we receive end up on his desk and are managed by him. Officials and social security agencies recognize him as our contact.

He began his career with industrial business management assistant training and after that worked as an HR assistant. After further training to become an HR specialist, he joined us as an HR officer.



He never gets bored because his job is full of variety. As a contact, he is available to everyone and provides staff and management with advice on matters affecting them.







#### Lukas Neuenhausen (26), Siegen

Lukas Neuenhausen's resume is no-nonsense. His interest in project management is obvious. His area of study was titled "International Project Engineering and Management" and in 2015 he joined us as a student apprentice, undergraduate student and student intern.

He joined our service unit as a junior project manager with the task of rolling out the "Bäumer Plus Connect" software. "I enjoy dealing with new technologies. I like to be able to offer customers new options, thus improving processes internally and externally."

But he has such a wide variety of talents that he has been standing in to manage the coordination of field service work for a few months. There he has a lot of contact with people from all over the world and with staff from all departments. He's ready to handle new surprises every day.





Christopher Schelges (24), Wilnsdorf

Precision is his specialty! We can find Christopher Schelges in the knife workshop in Plant 2, where he takes precision seriously.

After his industrial mechanic training, he worked for a few months as a technician at the University of Siegen and then came to work for us as a contract worker. He is therefore not an unfamiliar face. We know him from his time working as a plant and machinery operator at Bäumer. Now he is a permanent employee and works at the knife making machine, where the knife blanks are cut, notched and sharpened.

He does the work with extreme precision, which is how it should be done, since otherwise it wouldn't be a Bäumer-guality knife. This makes his work interesting and varied. Knives are produced under strict quality standards. The knives must have high dimensional accuracy and concentricity as well as a very precise surface finish. After all, customers expect a top quality product when buying Bäumer knives.

#### Sebastian Lißner (34), Niederfischbach

Sebastian Lißner was not only a car mechanic, but also an automobile service technician. In his "first life" he enjoyed tinkering with cars. So how did he end up in our industry? Through competition!

In 2015 he joined the knife manufacturer Sitola as the plant and machine operator and produced splitting band knives. This has benefited Bäumer because today he produces band knives for Bäumer in the knife workshop.



Our knives are adapted to the different cutting materials, cutting technologies, and makes and models of cutting machines. "I value the positive work environment. Together with the knife workshop team I want to maintain the highest level of quality in order to stay competitive in the global market," he says, indicating his vision for the future.

#### Daniel Kreuz (24), Netphen-Herzhausen

A lot of suppliers provide us with their products to ensure that things run smoothly at Bäumer. Daniel Kreuz, the person in charge of purchasing, is responsible for making sure everything arrives here promptly.

Payment reminders are sent out if there are delivery delays. It is important to enter and manage all items. His range of tasks include adding new suppliers and placing orders. If there is a problem with a delivery, he submits a complaint about the order. Depending on the item needed, he obtains and compares prices. When there are problems, he talks to the supplier and finds a good solution.

He has a wide range of different tasks. "I especially enjoy talking with suppliers and colleagues. This is my strength."





#### Kim Steven Elfers (24), Siegen-Weidenau

With roots in Siegerland, Kim Steven Elfers completed his training and gained his first professional experiences as an industrial mechanic at Dango & Dienenthal GmbH.

He works very closely with our machines, which he pre-assembles and then installs and puts into commission at the customer's site. He really enjoys pre-assembly and his work within the team. To create a machine with his hands is right up his alley. But behind everything he does are thoughts of ambition: "Once I have gathered enough knowledge and experience, I would really like to pass it on to the next generation." We think that's great!



number of machines offered and their applications are both a challenge and and a motivation for me."

training.



#### Christian Schneider (37), Olpe

They travel often and do it all to provide services to our customers - including our machines. But even they want to know when they need to travel. As the head of field installations. Christian Schneider plans and manages installation services. This may involve new installations, repairs, maintenance work, control system modifications, commissioning or

After completing his power electronics technician training at Thyssen Krupp Stahl AG in Kreuztal and then completing master craftsman studies to become a foreman, he took on a wide range of duties at MEWO GmbH in Olpe before joining our field installation services team.

He really likes direct customer

across departments. "The large



#### Robert Landwehr (34), Cologne

After his industrial engineering studies, Robert Landwehr worked for a few years as a management consultant and is now a member of management and head of Materials Management at Bäumer. His job provides plenty of challenges.

He regards supply chain management (SCM) as a holistic approach which starts before order entry and goes beyond the scope of delivery. He faces the daily "fight" against central capacity constraints (man, material and machine) with confidence. He trusts his staff and is positive and encouraging. He really enjoys his work with colleagues, and you can tell. He strikes the right chord with everyone, regardless of whether they work as a machine operator or member of management.

"Higher goals include supply reliability in production as well as capacityoriented production planning to ensure that all Bäumer machines are delivered on time and at the highest level of quality to the customer."





#### Muzaffer Yasin Karakus, 36 (Attendorn)

In addition to solid framing, a Bäumer machine needs a safely operating electrical system. Motors need to work, cutting units need to run, and safety procedures need to be followed in an emergency situation. Muzaffer Yasin Karakus' experience in building engineering helps him significantly with his installation and programming work

"Muzi", as he's called by his colleagues, likes working at Bäumer. He likes coming to work because his work is varied.

"If you are having trouble making progress, there's always someone around who can help you out." The positive work environment consists of a willingness to help and commitment to every individual. "It helps a lot that everyone has their own tool. This makes work more efficient and stressfree." He enjoys coming to work every morning. The team is reliable and helpful. Thanks to his varied tasks, he can gain excellent and valuable experience.

#### Oleg Arndt (30), Siegen

In order to work in logistics, you have to have a good overview above all else. Oleg Arndt has been able to do this keep everything running smoothly.

His task at Bäumer is primarily to pick components for the paint shop. This means that he has to provide all the required parts of an order and deliver these to the respective crew. He particularly likes being self-reliable and working independently. When an order comes in, he immediately



knows what to do. This challenge, which he has to face again and again every day, truly makes him happy.

After finishing his training to become a logistician, he spent 5 years accumulating experience at Bombardier Transportation GmbH. While working there, he completed his certification to become a foreman in logistics services between 2015 and 2017 in order to advance in his field of expertise.

#### Simon Johannes (26), Siegen-Trupbach

It appears as if Simon Johannes is drawn to family-owned businesses. Before joining the Bäumer familyowned business, he worked in his own family-owned window manufacturing business called Johannes GmbH. He worked there during his early school years and then completed his bachelor degree in industrial engineering. His focus was on standardizing electric window motors.

At Bäumer he now works in project management. He pursues his goals consistently and successfully. Occasionally he faces specific challenges that he has to overcome. He is very interested in developing and implementing solutions-a task that he enjoys greatly. He would like to work closely with customers and "...develop the technical feasibility of different system solutions." He particularly likes the helpfulness of his colleagues who are always supportive.



#### Martin Tauz (51), Kreuztal

A warm welcome to Martin Tauz, a shop fitter with years of professional experience, who is now working with the Siebel crew on final assembly. He obtained his journeyman's certificate in 1985 and gained valuable experiences and impressions working at various companies.

In between jobs he took a break from his profession as a shop fitter and was self-employed for 10 years working on garden landscape design, specializing in sealing systems. After that he returned to his profession as a shop fitter for a few years.

While searching for new challenges, he joined Bäumer. He works in final assembly and adds the finishing touches to the machines before they are sent out to the customer. His goal is to contribute to improving the company over the long-term through his work.

# the wide range of machinery. "Every machine has its own unique feature."

experience his colleagues have. They willingly share their experience to help him in his development. His goal is to provide stable support to the Bäumer team and to contribute to the positive work environment.



#### Dennis Klees (23), Wilnsdorf

Dennis Klees is new to the Bäumer team. Welcome! He previously worked at Hees Group, where he completed his training as a plant technology electronics technician. He first worked for Bäumer as a contract worker, but he impressed everyone with his work and let his work speak for itself. His field of expertise is in the installation and commissioning of a wide variety of machines. Simply stated, he puts the machines through their paces.

Dennis enjoys working at Bäumer. The job offers a lot of diversity thanks to



He is impressed with the amount of



#### Thomas Prinz (33), Hilchenbach

Thomas Prinz became a permanent employee after first working as a contract worker for Bäumer. His first position within the company primarily involved assembling machines and conveyor belts. Since then his scope of work has expanded and now he handles quality management accounting, among other tasks, as an internal auditor.

He previously completed industrial mechanic training at Wilhelm Schumacher in Hilchenbach and then switched over to Siemag. He worked full time on completing his training to become a foreman in 2015 and furthered his studies in the area of quality management.

His goal is to gain a foothold in the company and to learn about and understand the technology of the individual machines. He is particularly interested in how to develop and improve the machines. His goal is to work with determination and take advantage of every opportunity to advance himself and thus also the company.





#### Wolfgang Schmidt (48), Wilden

Wolfgang Schmidt joined the Bäumer team with a great deal of technical expertise. He worked for several companies and gained a lot of experience, which he is able to contribute to the company in many ways.

He completed his industrial mechanic training at Wilhelm Schäfer in Neunkirchen. No task can throw him off course that quickly. He works in final assembly at Bäumer, where he checks the functionality of the machines and adds the finishing touches.

What a surprise! At Bäumer he met old familiar faces, since everyone knows it's a small world after all. He particularly likes the friendly and respectful way people speak within the company. "I feel completely at ease here."

Part of his daily routine includes working in a team. He has a good relationship with his colleagues and likes coming to work. His desire and goal is to stay at Bäumer for a long time. "I don't want to go anywhere else.

#### Alexander Heckel (30), Wilnsdorf

In 2005 Alexander Heckel started his logistics technician training at Christoph Bornebusch GmbH & Co. KG in Siegen, where he completed some stations: from purchasing to sales. From 2010 to 2016 he worked at Jung/Zitec. There he completed his advanced training to become a logistics foreman.

He wanted to join a machine construction company because he has always been interested in how machines are assembled. Bäumer has been a long-time customer of Jung, which is why it was even more interesting to him to see how and



were the parts are installed that he had been selling all those years.

At Bäumer he is now responsible for assembling the components in the electrical operations unit for products such as switch cabinets.

He enjoys seeing how the many individual parts come together to make up the whole unit.



Ralf Stinner (41), Birken-Honigsessen

For a long time, Product Development had been on the lookout for new talent. Ralf Stinner's job is to bring machines to life, since he is responsible for the software development.

He first completed his training to become a power electronics technician and then continued his education by studying electrical engineering at the University of Siegen. For many years he worked for Unia GmbH in Kreuztal. There he planned and carried out projects while working in the electrical engineering department, where he designed and developed software.

By his own admission, he especially appreciates the high quality of machine construction at Bäumer. He likes to work with a company where premium quality is a priority, holding true to the principle that doing good work results in a good finished product. He aims to please his loyal end customers so that they enjoy smooth production processes using the machines.

# CONGRATULATIONS **ON THE ANNIVERSARY CELEBRATIONS IN 2017**

#### 40 years

- Hans-Jörg Schuster
- Jürgen Kämpf
- Edgar Holzhauer
- Karlheinz Siebel
- Klaus Schneider
- **Michael Christ**

BRIEFLY NOTED



#### Member of the Verein Wirtschaft für Südwestfalen (Southern Westphalia Business Association)

Bäumer is involved in many areas to help strengthen employers. And this is no longer a secret. But it is also not that well known. One of the association's media sources the region. With this involvement, Bäumer is promoting regional marketing. Southern Westphalia is the number one is the website suedwestfalen.com, which provides a lot industrial region in North-Rhine Westphalia and home to of interesting information about the region. It's worth more than 150 global market leaders and many attractive taking a look!



#### **25 years**

- Stefan Franz
- Maik Riabzow
- Pancras Anselm Devendranath

#### 10 years

- Carina Schwitalla .
- **Christian Bendel**
- Stefan Bertelmann
- Tim Schreiber

# Unser starker Standort Südwestfalen ALLES ECHT!

(*O*) information about the region: www.suedwestfalen.com

# NEW ISO STANDARD 9001:2015 CALLS FOR A MIND SHIFT



# Bäumer was one of the first companies in the industry to initiate and implement a certification process in a targeted manner.

To start with, the Bäumer department managers were instructed about the changes in the standard with the assistance of Ms. Kruck from our certifier Lloyd's Register Quality Assurance. This training event had a real "wow" effect: Handled correctly, the QM system can support the goals of the entire organization. Then the next step involved "tidying up and organizing" the processes. Every department put together and processed their task package. The general rehearsal for certification was carried out by means of a GAP analysis.

## In mid-March 2017, we successfully completed the certification process according to ISO 9001:2015

A clever move also with regard to the planned and initiated implementation of our new ERP system this year, which is where the process descriptions that were newly created or updated according to the new standard will be used because they also serve as a basis and an overview of the process flows in the new ERP system.

#### Challenge met by Bäumer quickly and efficiently

Through certification a company proves that it is able to continuously supply products and services which meet customer requirements and legal as well as regulatory



requirements. And all of this according to the state of art and the newest criteria and methods of a modern quality management system.

Companies must have implemented the changeover to ISO 9001:2015 by September 2018. Bäumer has already taken this step successfully.

#### New certification is a true challenge

Many companies struggle with its implementation because there is more to it than meets the eye. Two new features are especially remarkable:

Many companies struggle with its implementation because there is more to it than meets the eye. Two new features are especially remarkable:

- 1. process management becomes more important and
- 2. the strategic alignment of the organization must be linked more closely with the QM system

#### Rethinking and managing processes

A process-oriented approach becomes more important. This means that processes have to be rethought and supported by the management level. Previously, processes were implemented more intuitively than operatively controlled and reviewed. At Bäumer, process diagrams were prepared together with the staff to promote and to root process thinking. Process results, risks, and opportunities as well as the associated operating figures were determined. We use modern media for documentation and make them accessible to everyone, thus creating transparency.

#### Management level is obligated

Now it is necessary to take into account the long-standing criticism that the QM system was insufficiently supported by the management level. However, this statement is not entirely true, for oftentimes the situation is not caused by a lack of commitment but by insufficient integration of the management into the QM system.

"The top management must demonstrate leadership and commitment with regard to the quality management system."

The connection of business goals with the QA system is a true milestone. The strategic goals have to be in line with the quality goals as well.

On the whole, the management level must be responsible for quality management, not just the QM officer.



# COMPANY RUN 2017

#### BRIEFLY NOTED

#### **Global market leader champion**

Bäumer is listed on the global market leader index:

The University of St. Gallen published the global market leader index by industry for Germany, Austria and Switzerland. It's no surprise to us, but makes us proud. We are pleased to read it in black and white in a renowned and independent study.

The unique features of this study are the clearly defined selection criteria and the fact that the list is accessible to all. The selection process is therefore objective and transparent.

The study was reported in *Wirtschaftswoche* magazine, among other sources.



## **"RUN FOR FUN WAS** OUR MOTTO FOR THE 14TH SIEGERLAND COMPANY RUN ON JULY 12, 2017."







## USING LEAN MANAGEMENT FOR NEW OUTGOING GOODS DEPARTMENT

Service is very important to our customers. Outgoing Goods depends on this interface. This is where spare and wearing parts are shipped out to our customers—quickly, reliably and at a reasonable price. However, the rising volume of goods presents new challenges for Outgoing Goods.

Particularly within the last four years we have noticed a sharp increase in outgoing goods. In 2017, approximately 50% more packages were shipped out than within the same period in 2013. This is a real challenge that Outgoing Goods must accept...

Peter Paetzold took on this task together with staff members. The goal was to make the processes more efficient and effective based on the lean management principle.

#### Streamlining Outgoing Goods through lean management

Peter Paetzold started by doing an inventory assessment. He simply worked within the team to get a quick overview of the situation.

"The jobs were not organized for good flow. Packaged goods were set down randomly. The packaging materials were old, the Outgoing Goods door was too small and the technical equipment was inadequate, just to name a few issues," Peter Paetzold noted. It couldn't continue like that.

#### Lean management workshop led to the end goal

Lean management includes the close involvement of affected staff and holding a workshop to work on streamlining processes. The dedicated team decided to hold the workshop during the Christmas break so that it would have no negative impact on Bäumer customers. Edgar Holzhauer, Pancras Devendranath, Helmut Wallmeroth and Peter Paetzold then met for the workshop, where they worked on the target concept. Everyone was very excited about it. "It was really fascinating. The workshop was fun and helped us make tremendous progress," Edgar Holzhauer said.

Everything was attached to a pin board and then reconstructed using simple tools. Tables were pushed together, shelves were moved around and paths were defined. This arrangement was then put to the acid test and found to be good.

### The new Outgoing Goods department provides significant advantages

Specific improvements were made based on the results of the workshop and testing phase:

- The packaging stations are equipped according to the latest findings.
- The floor has visual signals to mark defined stations.
- The company made sure that staff could work ergonomically with many new acquisitions:
- Three-axle gantry crane for transporting heavy loads
- Roller conveyor to eliminate the need to carry packages
- Electric forklift used for lifting objects like a mesh pallet to an ergonomic height, making it easy to remove items.
- The material flow will be improved by combining the two spare part pre-assembly lines near Outgoing Goods.

 Long, bulky items to be shipped now fit easily through the widened loading zone. In addition, package delivery and loading onto trucks run in parallel.

 The new paper padding system offers many advantages over the outdated Styrofoam flocking: the products are protected better, saving time and money. The cost of materials has dropped 60%.

But that's still not enough.

#### New ERP system offers new options

Further improvements have been implemented with the introduction of the new ERP system. In the future, the customer will be able to better identify which items are in a particular package within a consolidated delivery because each item will be labeled.

The package labels can be produced using NAVISION. Manual handling is no longer necessary.

Furthermore, it is possible to link the scales to the ERP system. Previously, shipping weights and volumes had to be entered manually. Now shipping weights can also be compared, thus minimizing errors. If too many or too few items are packed in a package, the system flags the deviation in weight.

The use of a scanner is also new. It assigns the shipping labels to the right packages.

None of the employees would want to go back to the old work area.

What a success!





#### Lean management instructor Peter Paetzold (28)

"The principles of lean management are a key component to strengthening Bäumer. It makes sense to establish lean management throughout the company so that Bäumer always remains competitive in terms of costs, delivery times and quality. This job especially motivates me because I work with many people from a wide variety of departments. I learn a tremendous amount from this because at Bäumer the staff are experts and know what they are doing. It makes me proud that employees trust me, adopt my enthusiasm for the work and give it their all. I take away the fear of change when they see that it actually works and that it will make their job easier.





#### 0

Lean management has now also come to us. The crisis that started in 2009 and continued through 2014 showed us that we need to improve our processes. Today we are just about done, but we don't want to stop there. Technical expertise and engineering "made in Germany" will be less of a guarantee of the ability to remain competitive in the future. Particularly with the high complexity of our products we have to optimize processes along and downstream of the value-added chain. This is where lean management is applied.



Former Outgoing Goods department without visual management



Temporary setup of the desired arrangement for testing the new processes.

# **C IF YOU LIKE TO ASSEMBLE MACHINES, YOU'VE COME TO THE RIGHT PLACE.**

Nawaphon In-Urai, plant and machinery operator trainee

# **B**XUMER

BAUMER

#### Albrecht Bäumer GmbH & Co. KG

Asdorfer Straße 96-106 57258 Freudenberg, Germany Phone: +49 2734 289-0 Fax: +49 2734 289-289 Internet: www.baeumer.com E-mail: contact@baeumer.com

#### **Baumer of America Inc.**

P.O. Box 18 425 Route 202 Towaco, NJ 07082, USA Phone: +1 973 263 1569 Fax: +1 973 299 8587 E-mail: serviceusa@baeumer.com

#### Bäumer of Japan Inc.

German Industry Park 458 No. 1 - 18 - 2 Hakusan · Midoriku 226-0006 Yokohama, Japan Phone: +81 459 3177 33 Fax: +81 459 3177 90 E-mail: kotaro.y@baeumer.co.jp

#### Bäumer of Shanghai Machine Trading Co. Ptd.

Ltd. Rm.2714, Bldg. 2 58 Xinjian Road (E) Shanghai, Minhang 201199 Shanghai P.R. China Phone: +86 18930514448 Fax: +86 13601840976 E-mail: carlos.chen@baeumer.com