

MARKER

The magazine for the sheet metal working industry

Autumn 2016



Machine setups in record time **8**



New ways forward for
Generic Punching
Systems **12**



AMADA presents its
industry highlights
in Hanover **2**



Digital sheet metal working
becomes a reality:
V-Factory **6**



Dear Valued Customers,

AMADA has prepared innovative solutions for you in our booth at EuroBLECH 2016, one of the flagship trade fairs in our sheet-metal industry. Making a global debut in Europe, we will be presenting new products and new process solutions based on state-of-the-art technologies such as fully automated bending solutions and our unique fiber laser oscillator using the latest laser technology to achieve high-output, -speed, and -quality machining. "V-factory" will be introduced as a prologue to AMADA's new IoT manufacturing. As a specific example, Visitors can experience a live demonstration of VPSS 3i sheet-metal engineering system, AMADA's IoT solution covering the entire range of sheet-metal processing.

AMADA has reached our 70th anniversary this year and we have been expanding our base across Europe in recent years to prepare for our 100th anniversary. You can see state-of-the-art solutions at EuroBLECH and at our various AMADA Technical Centers throughout Europe. AMADA presents its latest innovations, as well as the associated advantages and improvements, all of which have been developed true to our motto "growing together with our customers" in order to continuously optimize the benefits our products bring to them.

Mitsuo Okamoto
Chairman & CEO,
AMADA HOLDINGS CO., LTD.

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EuroBlech 2016

Forward-looking solutions



AMADA at EuroBLECH:
Hall 12, Booth D06/F06

From 25 to 29 October, the city of Hanover will be host to the 24th EuroBLECH trade fair. Here, AMADA will be presenting its latest innovations for industrial sheet metal working. The core issue: integrated, more efficient production.

Under the motto "Using cutting edge machines and sheet metal working technologies to create added value for our customers", AMADA intends to present eight machines featuring state-of-the-art technology and also solutions from AMADA MIYACHI at EuroBLECH 2016 in Hanover.

Over an exhibition space of 2,000 square meters, visitors will be able to experience systems for fiber laser cutting and welding (p. 3-4), a combination machine (p. 4), as well as partially and fully automated press brakes (p. 5) in action. In addition, experts will be available to explain the benefits of laser ablation, resistance welding and fiber laser welding for applications, for example, in the automotive, electronics and solar cell industries. AMADA also proves that it is at the forefront of the digital world with its V-Factory concept.

At EuroBLECH, the specialist for the sheet metal working industry will be presenting new software solutions (p. 6-7) for fully net-

worked, digitalized production. You can find more detailed information on this year's machine and software highlights in the following pages. •

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Perfect welding and cutting

New standards in laser technology

Exceptionally fast, high-quality laser processing is now possible even for thicker materials. With its new technologies and solutions, AMADA is extending its range of products and performance in the field of laser technology. This includes more powerful beam sources, ENSIS technology for welding applications and efficiency-boosting automation solutions.

In 2010, AMADA became the first manufacturer in the world to fit its own machines with a fiber laser source developed in-house. This showed itself to be nearly 70 percent more efficient than CO₂-lasers and permitted exceptionally high-speed, energy-saving cutting, thus dramatically reducing the processing costs per part. In general, the fiber laser was particularly well suited for machining parts of thicknesses up to 3 millimeters. Since then, AMADA has continuously further developed its laser technology in the form of the FLW fiber laser welding cell, the ENSIS AJ and LCG AJ series of lasers and the ACIES AJ punch/laser combination machine. "With this line-up, which will be presented for the first time at the EuroBLECH 2016 in Hanover, AMADA is boosting its performance in the field of laser-based welding and cutting – through improved cutting quality and faster workflows that are now possible even for thicker materials," says Axel



Axel Willuhn,
Product Manager
for Punching
and Laser
Technology,
Amada GmbH

Willuhn, Product Manager for Punching and Laser Technology at AMADA.

New fiber laser welding

The proven ENSIS beam source used in the AMADA fiber laser, originally used for cutting technology, has now been modified for welding applications. The result is the new FLW ENSIS M3 fiber-laser welding system that provides optimum welding results thanks to the integrated beam modulation capability. The system covers a wide range of production possibilities and permits welding

with or without wire as well as deep welding. As a result, housing components and claddings can be manufactured with the same outstanding precision and economic efficiency as deep-welded machine components. The laser beam modulation capability makes it possible to respond precisely to the needs of each individual application. Weaving, in which the welding head is equipped with a rotating lens, makes it possible to bridge gaps that are up to 30 percent wider than is possible using conventional welding lasers.

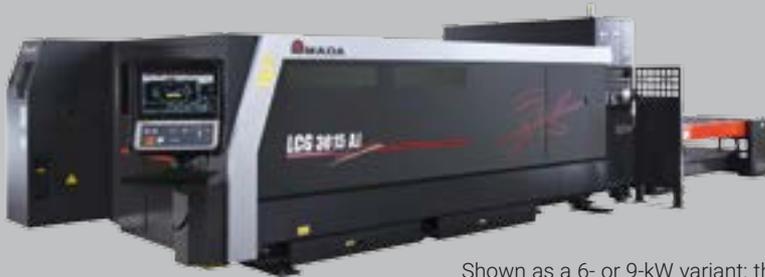
More powerful beam source

For the laser cutting field, AMADA is able to provide the ENSIS-3015 AJ and LCG-3015 AJ – cutting machines for perfect, top-quality cutting ▶

The new FLW ENSIS provides maximum efficiency.



The latest generation of laser technology



Shown as a 6- or 9-kW variant: the LCG-3015 AJ.



Now with fiber laser: the ACIES-2515 AJ.



The new 3-kW version of the ENSIS-3015 AJ.

► results that have proved their worth many times in practice. Both system types are available as of now with more powerful laser beam sources. Thanks to this performance boost, it is now possible to cut even thicker materials faster than before. As a result, using the new 3-kW version of the ENSIS-3015 AJ, the nitrogen-based cutting of thick stainless steel sheets is no longer a problem. The LCG-3015 AJ is exhibited in 6- and 9-kW variants equipped with a more powerful laser.

This ensures improved performance in all areas where nitrogen is used as a cutting gas. It makes possible the high-precision cutting of thick sheets as well as the machining of highly reflective materials such as copper, aluminum, brass and titanium. The new, more powerful beam sources in the ENSIS-3015 AJ and LCG-3015 AJ are consequently setting new standards in terms of maximizing productivity, ensuring outstanding cutting quality and permitting the greatest possible flexibility of application.

Now with fiber laser

The proven ACIES punch-laser technology is now also available as a fiber-laser variant in the form of the new ACIES-2515 AJ. The system brings together all AMADA's metal working expertise and permits the production of even small runs of highly complex components. Once all the punching and forming operations have been performed, the fiber laser cleanly cuts all the parts to the required contour. This ensures exceptionally efficient production operations, in particular because the laser – which now contains virtually no more optical components – is significantly less maintenance-intensive than a CO₂-laser, for example. This means: With the new ACIES-2515 AJ, production is possible 24 hours a day, 7 days a week – providing outstanding process availability combined with extremely low maintenance costs. One final benefit is that the ACIES operates without any risk of scratching, because the lower tool system is actively controlled and retracts as necessary whenever the sheet is moved.

Automatically more successful

The outstanding efficiency and performance of the new systems can be boosted even further thanks to a range of automation options. Thus, for example, the ENSIS AJ and LCG AJ models can be equipped with an ASF-EU storage tower and a take-out-loader (TKL). In the ACIES AJ series, the use of the dual-tower system and optional tool changer make it possible to increase the level of automation to 95 percent or even more. This means that with the ACIES AJ it is possible to achieve long periods of unstaffed, uninterrupted operation. ●

Efficiency at the touch of a button

Automated bending

AMADA has the perfect solution for all bending scenarios.

With the HFE 3i, HG ATC and HG ARs series, AMADA is able to supply high-performance press brakes with varying levels of automation. Which of these three system types is chosen for the individual, high-precision, reproducible bending of metal sheets depends on a number of factors: "Decisive criteria include the batch size, as well as the extent to which the production of the component can be automated," explains Tankred Kandra, Product Manager for Bending Technology. "We can supply the perfect solution for each scenario – from manual press brakes through to fully automatic, robot-assisted production cells."

Change-overs in a matter of seconds

Of all the system types, the HFE 3i series, which more or less acts as the basic model, offers the lowest level of automation. It is ideally suited for manufacturing large runs of differently sized components which can either not be automated or can be automated only with difficulty. In this case, the relatively long setup times associated with the fairly infrequent need for a tool change are of little significance. By contrast, in the HG ATC series, tool changes take place fully automatically – thanks to the automatic tool changer (ATC). This takes the punches and dies from the maga-

AMADA has the perfect press brake for every bending task. Different levels of automation are possible depending on the batch size and component geometry – for outstanding precision, profitability and reproducibility.

zine and places them in exactly the required position in the press brake in a matter of seconds. And that is well worthwhile: "The ATC dramatically reduces setup times. Compared to conventional systems, the setup time is cut to between one and three minutes," explains Kandra. As a result, the HG series, which includes the HG-1003 ATC and the larger HG-2204 ATC, is perfectly suited for larger components of any batch size from 1 up that demand correspondingly frequent tool changes.

Individual handling

The HG ARs series, however, represents a completely new dimension in automation. It is suitable for medium through to large series and permits the unstaffed manufacture of even highly complex components. The seven-axis production robot performs all the movement and bending processes tirelessly and with outstanding precision. All programming work for the sequences of movements and bending operations is performed offline using the AR-CAM software that automatically computes the entire program. This saves a huge amount of time, in particular in the case of parts requiring

a large number of bends, and every movement sequence can be fully implemented in practice.

To permit high-precision, automatic component handling, the robot possesses a number of grippers that

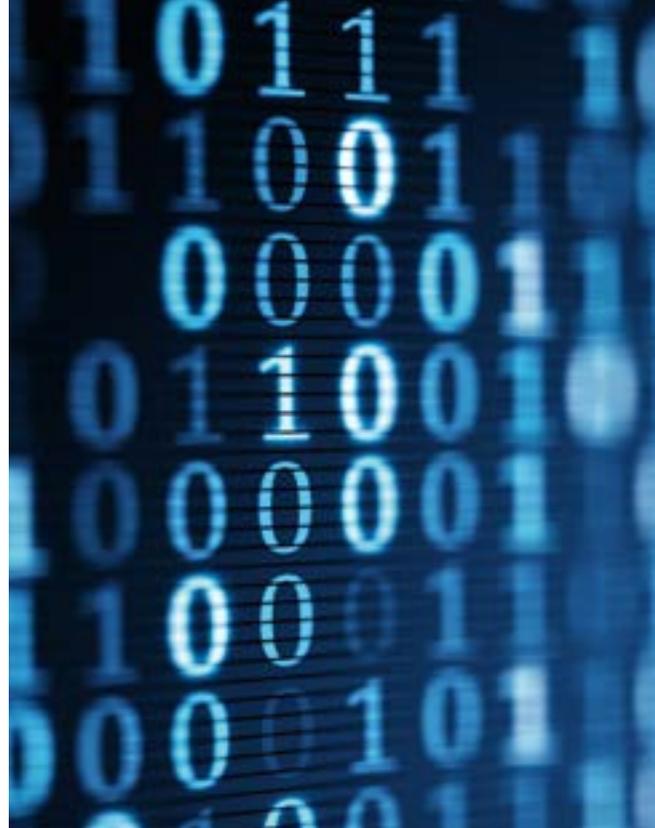


Tankred Kandra,
Product Manager
for Bending
Technology,
Amada GmbH

operate mechanically, pneumatically or in a hybrid mechanical-pneumatic mode. The key: The built-in gripper changer (AGC) automatically equips the robot with the appropriate grippers, which are always optimally adapted to the component size, movement sequence and applied force. The press brakes are controlled using VPSS 3i Bend Software. When the required component has been loaded, the software computes the ideal bending sequence, the associated tools, and the tool setup. All the programs are stored on a separate server and can be called up again at any time. The high-precision, totally reproducible bending operation can then begin – manually, semi-automatically or fully automatically. ●

A new dimension in automation: the HG-1003 ARs.





Digital metal working from a single source

The new AMADA Solution Packs

As part of its new V-Factory concept, AMADA is supplying individual Software Solution Packs for every area of the sheet metal working industry. Together with the "Virtual Prototype Simulation System 3i (VPSS 3i)", every production process can be externally programmed and planned in virtually every detail. Completely in line with the principles of Industry 4.0, this permits fast, economical, versatile digital sheet metal working from a single source.

At AMADA, the digitalization of things and the increasing networking of people and machines are more than just a vision; they are already a living reality. The best example of this is AMADA's "V-Factory" concept with the new AMADA Software Solution Packs. This represents a fully-featured software solution for digital sheet metal working. "Thanks to the real-time data, which is also available for mobile terminal devices, not only is the current production status of every job visible whenever it is needed," explains Peter John Hain, Software Application Engineer at AMADA. "What is more, with the V-Factory concept, all users will be able to compute their production processes more precisely in the future, react even faster to customer requests and process the corre-

sponding orders with outstanding efficiency." Depending on the required production mode, all programs for the laser processing, bending, punching and punch-laser combination fields can be prepared externally using the Blank, Bend, Robot and Weld Solution Packs as well as the Tube and Panel Bend Solution Packs. Together with the new "Virtual Prototype Simulation System 3i (VPSS 3i)", fully-networked sheet metal working is possible in a single end-to-end process that will greatly increase efficiency, for example through time savings of up to 70 percent. In addition, each of the AMADA Software Solution Packs provides individual tools and features that are specially adapted to the relevant production mode. However, each of the Software Solution Packs contains the Production

Designer – a universal importer for all 3D models and 2D drawings. Each individual order is defined and its processing computed in this before being further specified in the corresponding CAM Software Packs. The data is saved on the Data Management Server where it is immediately available for use on the relevant AMADA systems.

All-round solution

The new Blank Solution Pack is the fully-featured software solution for the external programming of all AMADA punching, laser and punch-laser combination machines. At the heart of the Blank Solution Pack lies the new VPSS 3i Blank programming system. Based on the production data that has previously been created in the ABE Planner, it

The even faster way to finished welded parts

Fully automatic punched part production

Robot-assisted bent parts

performs the nesting, sorting, technology assignment and NC code generation tasks. The Blank Solution Pack also contains the Parameter Explorer (PX) for the management of all machining parameters and the Data Explorer (DX), which is responsible for managing all the part and program data.

One-click bending

The new Bend Solution Pack represents the latest generation of fully automatic external programming solutions for the corresponding bending and pressing operations. It cuts the time required for program creation, simplifies the machine setup process and consequently reduces machine downtimes. The new VPSS 3i Bend bending program solution automatically computes the optimum bending sequence, performs collision checks and calculates the appropriate tool data – all within a clearly structured, user-friendly "all-in-one" user interface. The Bend Solution Pack also includes the ABE Planner, the Parameter Explorer (PX) and the Data Explorer (DX).

Fully-automatic bending

The new AMADA bending robot generations can also be programmed



Peter John Hain,
Software Application
Engineer, Amada GmbH

externally and semi-automatically – thanks to the new Robot Solution Pack and the AR-CAM software it contains. This eliminates the

time-intensive teaching of the system and the next 3D programs can be created while production of the last batch continues fully automatically. The solution uses the same 3D bending models that are employed in the VPSS 3i Bend bending program solution. This guarantees that even small series can be produced extremely economically. At the same time, the stored data makes it possible to prepare even demanding components for manufacture in a very short time.

Faster to the finished part

In the welding field, it is now also possible to program the FLW welding cell externally using the Weld Solution Pack. This speeds up the process from the 3D model through to the finished part. Capacity utilization is also increased because external programming can take place during live machine operation. Programming is

performed in a virtual 3D environment using the VPSS 3i Weld software. FLW CAM 3i identifies the edges that can be welded and assigns welding properties and a machining sequence to these.

From a single source

The new Tube Solution Pack has been developed especially for the machining of tubes and profiles. This combines the Solidworks high-performance Sheetworks 3D design software with the Tube CAM software, which now permits fully automatic programming including nesting for AMADA tube lasers. Optionally, the Tube CAD module for tube laser design and programming may also be integrated in Sheetworks. The combination of Sheetworks and Tube CAM ensures that the corresponding NC programs can be created extremely quickly. ●



Thanks to the new AMADA Solution Packs, all AMADA systems can be externally programmed – for fast, economical and flexible metal working.



Custom tube and profile machining



End-to-end solution for surface components



Bent parts from a single source

KWM Karl Weisshaar Ing. GmbH, Mosbach

Machine setups in record time

Once a component has been programmed, it can be manufactured again with outstanding precision at the touch of a button.



Based in Mosbach, Germany, KWM Karl Weisshaar Ing. GmbH provides an excellent example of how small batch sizes, in particular, can be produced faster and more economically. A good six months ago, the company commissioned its new AMADA HG-2204 ATC press brake with automatic tool changer – and was able to cut its tool setup times by half.

Where in the past, the press tools, which can weigh up to thirty kilos, had to be fetched manually from the shelves, balanced on a truck and then heaved onto the press brake, all there is now silence. All that can be heard is a gentle humming as the dies and punches are moved in the twinkling of an eye from the magazine into the press as if by magic.

Reproducibility at top speed

This process is part of the AMADA HG-2204 ATC press brake with automatic tool changer which has been in use for over six months at the Mosbach-based KWM Karl Weisshaar Ing. GmbH. The company, which was founded in 1979, now has over 500 employees, is one of the largest suppliers in the sheet metal working and machining sectors and produces components for the printing press, automotive and foodstuffs industries, as well as for

railway vehicle manufacturers, mechanical engineering companies and businesses active in the medical engineering and clean room technology sectors. "The new system is especially well suited for small runs," says Karl Weisshaar, speaking on behalf of the company's Managing Board. "Once a component has been programmed, it can be produced again at any time at the touch of a button. The automatic tool changer ensures completely accurate tool positioning and guarantees outstanding reproducibility." And at the AMADA HG-2204 ATC press, all of this is possible in record time: "Thanks to the automatic tool changer, the average retooling time has been cut from the previous 15 to 20 minutes to approximately three to five minutes, irrespective of the tool configuration," explains Holger Guddat, Assistant to the Managing Board. "This makes it possible to cut the setup times for each product part by up to 60 percent compared to the manual press brake." A fur-

ther benefit lies in the significantly reduced strain on the employees, who no longer have to laboriously equip the system with the heavy tools by hand but can instead perform the task at the simple touch of a button thanks to the automatic tool changer (ATC). "This also eliminates the risk of damage, for example when removing or installing the tools," continues Thomas Leutz, Supervisor of the Bending Department. "And all the tools (upper and



Discussion between experts: Managing Director Karl Weisshaar (right) and Herbert Nowak, AMADA Sales Representative.



Thanks to the new AMADA HG-2204 ATC press brake, it has been possible to reduce setup times for each product part by up to 60 percent.

- ▶ lower tools), which have an impressive overall total length of 34 meters, are safely stored out of harm's way in the ATC itself."

Four meter-long tool configurations

At the same time, the new system can also be used to produce much more complex components than were possible in the past as well as complete assemblies, because the new HG-2204 ATC possesses a 4,000 millimeter beam length and a press force of 2,200 kN. "Across the available length of four meters, it is possible, in particular, to accommodate a large number of tool stations in order to permit the fast, economical production of demanding components with differing material thicknesses," explains AMADA Sales Exec-

utive, Herbert Nowak. KWM Karl Weisshaar Ing. GmbH is currently using the new machine to manufacture carrier plates and claddings for rail vehicles, as well as complex assemblies for the mechanical engineering and beverages industries, in the 1 to 50-unit runs that are typical of the company's activities.

Top quality at the touch of a button

What form does a typical production workflow take? The operator uses the operating panel to access the stored component programs and then presses a button to select the required manufacturing configuration. The automatic tool changer then works autonomously to take all the required lower and upper tools from the magazine and place them

in the press in the tool position computed by the software. The machine is now fully tooled and ready to start production. Thanks to this process, every component is manufactured precisely and 100-percent reproducibly – irrespective of the time that elapses between the individual manufacturing runs. This means: Even the first component of a restarted series is produced in flawless top quality without any need for read-





KWM Karl Weisshaar Ing. GmbH uses the new system to manufacture batch sizes of between 1 and 50 parts.



At present, the new press brake is being used to manufacture carrier plates and claddings for rail vehicles as well as complex modules for the mechanical engineering and beverages industries.

adjustments or detailed adaptations at the tool or the machine.

Trust that goes back decades

And Weisshaar GmbH has been able to rely on this exceptionally high production quality for many years. More precisely since 1986, when it purchased its first press brake in the form of an RG-2512. Currently, a total of 18 AMADA systems are in use at the Mosbach site. "One of the outstanding hallmarks of AMADA is that every machine permanently and reliably meets the very highest quality standards. That has always been so in the past and this experience has been confirmed again one hundred percent by our new press brake," confirms Weisshaar. And if once in a while – which very rarely occurs – there is a malfunction or

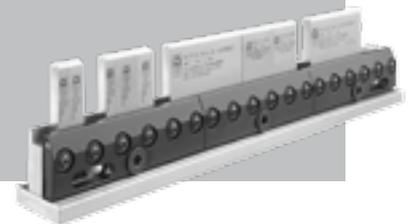
problem at a machine then the long-standing, close partnership between the two companies means that a remedy can be found without delay. Leutz: "We are in direct contact with AMADA via its hotline and service department and can get immediate help and support. The same is true whenever we need substitute or spare parts. The fact that these are delivered to us with no loss of time helps us minimize downtimes. A service agreement that is excellent value for money."

Further systems planned

Overall, after over half a year's operation, the new machine has more than proven its worth. The increases in productivity speak for themselves, as does the elimination of the strenuous work once performed by

The new FEAT A.F.H. Toolholder

The new AMADA FEAT A.F.H. toolholder is now available with immediate effect. Thanks to its outstandingly precise and accurate tool retention features, it ensures exceptional manufacturing reliability and reproducibility. It can be fixed in place quickly and securely with just a few screws and has a built-in visual display to indicate reliable positioning. And compared to the model that preceded it, the new AMADA FEAT A.F.H. toolholder reduces the time taken to secure tools in place by three-quarters.



the employees. And from a purely economical viewpoint, the value for money represented by the new system was a telling argument from the very beginning. "That is why we have made a firm decision to purchase at least two more AMADA presses from this series in the next two to three years," states Weisshaar, describing the company's future intentions. "Ultimately, the market is increasingly demanding smaller batch sizes that have to be manufactured quickly, flexibly and economically. AMADA's systems are the perfect way for us meet these requirements." ●

Karl Weisshaar with Holger Guddat, Assistant to the Managing Board (right) and Thomas Leutz, Supervisor in the Bending Department (center).



Generic Punching Systems (GPS), Dudley, U.K.



Another step forwards

Since procuring an AMADA CNC-controlled ENSIS-3015 AJ fiber laser-cutting machine last year, Generic Punching Systems (GPS), a company based in Dudley in Great Britain, has been able to open up new opportunities for the future. And, in doing so, save up to 50 percent in energy costs.

Founded in 2002, GPS concentrates primarily on the construction industry. However, it also supplies products to a series of leading furnishings and street furniture manufacturers. The products manufactured by this British family-owned company range from small mounting brackets and Trimline guttering through to rainwater piping systems and facade claddings. These components are used for example in the training facilities of Stoke City Football Club, the Metropolitan University in London, the Science Museum Research Centre and the legendary Silverstone race track for which GPS has manufactured 16,500 panels. For over a decade, GPS has exclusively used tools and machines from AMADA due to their high technological standards. After moving premises in 2015, the company took a further step forwards by purchasing an

AMADA ENSIS. "To replace the AMADA LC-3015 X1 NT CO₂ laser cutting machine, we invested in an ENSIS AJ, canceled the lease on our former premises of barely 280 square meters where the X1 had been installed and leased a new site measuring approximately 930 square meters," recounts Geoff Bull, Managing Director of GPS. "This allowed us to increase production by 45 percent and save about 1,000 pounds a month in energy costs. Thanks to the ENSIS, these have been cut by approximately 50 percent."

Machining a wide range of materials

GPS uses a wide range of different materials. More than 60 different materials are machined on the ENSIS every month. With the new fiber-la-

ser cutting machine, we can now also cut copper and brass, something that was not possible using the old CO₂ laser cutting machine. The batch sizes are usually between 10 and 50 units. Although this British company often delivers one-off prototypes, the order volumes can also reach as much as 3,000 units. "We cut standard steel in thicknesses up to 25 millimeters and stainless steel of up to 15 millimeters – as a result, we use the full potential of our ENSIS," says Bull. "The machining speed of the ENSIS is particularly pleasing. We are now able to produce on a just-in-time basis. We use the amounts we save every month to buy larger materials quantities at more attractive prices, for example. And the quality is also just what we need. The cut edges are all smooth and free from defects: No deburring or cleaning work is needed."



Geoff Bull, Managing Director at GPS (top), is enthusiastic about the efficiency of the ENSIS-3015 AJ (left). One of the great benefits is the machining quality: smooth cut edges on all the products (right).



Another factor influencing Bull's decision to invest in the ENSIS was his wish to act as a pilot customer – something he achieved in 2015. "I wanted AMADA to send potential customers who want to see the system in operation to us," says Bull, "I enjoy sharing my experience. And, of course, there is something exciting about being the first company in Great Britain to have an ENSIS at your site." Word-of-mouth recommendations have always been the way GPS has achieved its success. The company allows its work and its impressive array of machines to speak for themselves instead of paying vast amounts for advertising campaigns. "We have seen how our business has grown over the last ten years thanks to the procurement of the right machines," says Bull. "Around four years ago, our turnover was just about 460,000 pounds. This year, we achieved half of that in the first quarter alone. A lot of people think that machines of this class are

unaffordable for small family businesses – we have 15 employees – but we have shown that it is possible. Our AMADA machines pay for themselves. And what is more, we believe that they are the best machine tools available on the market."

More efficient production workflows

GPS currently possesses a total of five AMADA machines. These include two HFE series press brakes and an EMZ-3620 NT punching machine. "I can still remember the first order that we completed on our AMADA EMZ punching machine in 2014 – we saved 43 hours during the punching work and 48 hours during programming," explains the Managing Director. "All of a sudden, we could complete an order that used to take five days in just 1.5 days." According to Bull, what differentiates GPS from its competitors is the company's enormous commitment – no order is ever

refused, however great the challenges might be. However, he also attributes the company's success to the speed at which it completes its orders. "We are considered to be one of the fastest actors among the building system subcontractors," says Bull. "Our customers know that they are in safe hands if they entrust us with orders with fixed deadlines. Our business is more successful than ever before. And the new orders that keep coming in show that our customers are satisfied."

In the next phase of investment, GPS is planning to move to an even larger site. It will then install an FMS system that will be connected to the AMADA ENSIS and EMZ. Manufacturing at GPS will then take a further step toward a fully automatic production environment. ●

Excellence partnership with Eckert Schools

Investing in the future

Highly qualified technical experts are essential in the age of Industry 4.0. That is why AMADA is working together actively with the Eckert Schools further training center – as of July 2016 as an Excellence Partner in the mechanical engineering field.

”Training the next generation of skilled workers is particularly important for us. We want to help ambitious professionals build their careers and, in this way, strengthen our own personnel resources in the long term,” explains Rainer Freudlsperger, General Manager Sales South-East Germany at AMADA. In the sheet metal working industry in particular, qualified specialists are in great demand. The Excellence partnership with Eckert Schools in Regenstauf is intended to help meet this need. It will include hands-on project work, specialist lectures from AMADA employees and regular company visits. And everyone benefits: Students gain from being asked to put their knowledge to work in practical tasks. At the same time, AMADA can present itself as an expert employer and technology leader. “Three mechanical engineers from Eckert Schools are already contributing to our team,” confirms Freudlsperger. One of these is Sebastian Gross. He is employed as an application engineer in AMADA's Technical Center in Landshut. He acquired the necessary specialist expertise, methodological know-how and personal skills in his advanced vocational training as a State-qualified mechanical engineer at Eckert Schools.

Always among the best

“Simply through our recruitment tests, we have seen that applicants from Regenstauf are generally among the best,” says Freudlsperger. Thanks to the specialist knowledge they have acquired and their ability to put it into practice, Eckert graduates usually stand out from other applicants. That comes as nothing new for Markus Johannes Zimmermann, Managing Director of the Dr. Eckert Akademie: “Our comprehensive training concept works. We constantly receive positive feedback from successful companies.” Alongside specialist lectures, cooperation during project

work and an open invitation to visit the factory and offices for excursions, the best three full-time graduates in the mechanical engineering field receive a special award every year as part of the collaboration. Among this year's outstanding graduates were Max Gruber, Christof Feldmeier and Alexander Deiminger. In July, AMADA rewarded these graduates with the AMADA Sheetmetal Award together with financial prizes worth a total of 2,250 euros. “Industry 4.0 is long-established fact. And as a result, no company can afford to do without technically gifted, practical employees,” says Freudlsperger, sharing his conviction. ●



The year's most distinguished graduate Max Gruber (second from right) with Carsten Seefeldler, Head of the Mechanical Engineering department, Rainer Freudlsperger, General Manager Sales South-East Germany AMADA, and Markus Johannes Zimmermann, Managing Director of the Dr. Eckert Akademie (from left to right).



Japanese tea ceremony

The secret of the Sados

In Japan, tea ceremonies have a long tradition and are a source of utter delight for lovers of this hot beverage. In today's fast paced world, in particular, they offer time for peace and relaxation.

As a fundamental element of Japanese culture, tea ceremonies have their roots in Zen philosophy. Which is why pleasure alone is not the only consideration. Instead, the aim during the ceremony is to achieve the Sado (Way of Tea), which is associated with harmony and introspective awareness. According to Japanese teachings, People of Tea are characterized by calm, tranquility and warmth and have learned to withdraw into themselves.

Much more than drinking tea

The sequence of a Japanese tea ceremony has remained practically unchanged for thousands of years. It can last for a number of hours and is presided over by a Tea Master. This is also the person who prepares the hot drink in accordance with pre-

defined rules. After the master has placed the powdered tea in a bowl, he pours the hot water over it and whisks it to produce a smooth blend. The bowl is then passed to the principal guest. The latter receives the bowl with thanks and audibly drinks the first sip from it as a sign of respect. The tea is then passed from guest to guest. Only when everyone has drunk is it time for conversation. In earlier times, a specially trained geisha with exceptional artistic knowledge was responsible for these conversations

A place of peace in everyday life

Japanese tea ceremonies take place in a separate tea house – a simple pavilion made from wood and bamboo and surrounded by a small garden. A short path made from stone

slabs (roji) leads through the garden to the house. Traditionally, the entrance consists of a low, rectangular sliding door which acts as a symbolic separation between the peaceful indoor space and the world outside. The participants bend as they enter the tea house as a sign of their humility.

Much of what happens in a traditional tea ceremony can be incorporated on a smaller scale in everyday life: By taking enough time to prepare and drink the tea. In this way, stress can be reduced and energy restored. •

Information

on Japanese tea ceremonies and demonstrations in Germany can be found at:
www.ueda-souko.de



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