



NETHERLANDS

'Investment in smarter production'

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For the past few months complete modules for bus chassis have been welded using a welding robot at VDL Bus Chassis in Eindhoven. Valk Welding supplied a system that positions modules varying from 2.5 to 5 square metres with 11 axes and welds them with the robot. Apart from the size of the system and the variation of the modules, the most important gains for VDL Bus Chassis were flexibility, the straightness of the modules after the welding and productivity.



After VDL Containersystemen and VDL Bus Modules, VDL Bus Chassis is the third company in the VDL Group to which Valk Welding has supplied a welding robot system. Factory Manager Louis de Jong from VDL Bus Chassis: "The experiences from our other colleagues are what prompted us to ask Valk Welding to make us a detailed proposal. At an earlier stage we had had difficulty with an overly complex proposal from another integrator, but Valk Welding immediately produced a good concept. That made it possible for us to get the green light for this investment quickly."

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"With the robot, we the modules now in 32% of the time "

Automatic handling

Up until now the modules were welded manually. Not including assembly and pre-attachment, the modules were welded in 6 ¼ hours in welding boxes. Louis: "The modules were clamped in a frame and in a turntable. After a number of welds the modules were manually positioned to balance the heat input as effectively as possible. That's what took most of the time. Also, after manually welding the modules had to be corrected for straightness. The robot welding system we've bought doesn't weld more quickly, but the time gains are found mainly in the automatic module handling.

TL-2000WGH3 robot that is positioned with a horizontal and vertical displacement over a track. This makes it possible for the robot to move freely over nine axes for optimal accessibility. The modules which are clamped into a frame and mounted in a C-frame are positioned by a heavy positioner that moves over two axes. "We produced the construction for the frames and the pneumatic clamping ourselves", explains Roel Bullens and Jos van Dijk from VDL Bus Chassis.

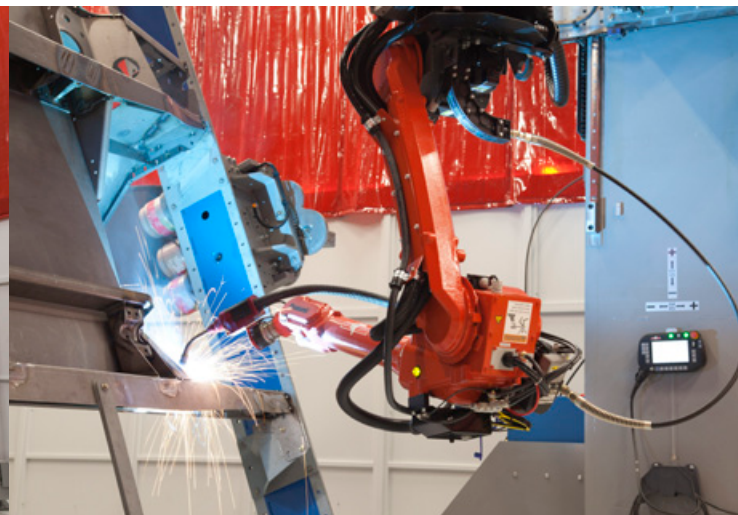
Short changeover time

Louis de Jong: "With only one way of clamping on the welding robot system it's a logistical

the VDL Group who work with DTPS in contact with each other next year. This is VDL's credo: 'Strength through cooperation'. It is important also to involve the construction engineers in this process. In the development of the new modules they have to take account of the robot's capabilities", emphasises Louis de Jong.



Louis de Jong: "The investment was not for just one project, but an investment in producing more efficient at a lower cost price."



High flexibility

"Our main requirement was for the welding robot system to be usable for all of the modules we manufacture here. That means that it must be possible to position both the small module of 2.5 x 2.5 m and the 2.5 x 5 m. The investment was therefore not for just one project, but an investment in producing more efficient at a lower cost price. The welding robot also had to be able to reach both sides of the modules. This is what we asked Valk Welding for. The idea was for them to deliver the complete system, including offline programming and measurement system. The clamping system and the load/unload system for the modules was designed and supplied by VDL Bus Chassis itself," says Louis de Jong.

Freely moveable over 11 axes

The system that Valk Welding delivered six months later consists of a Panasonic

challenge to minimise the changeover time for the frames with modules. For this purpose we've developed our own rail system on which the frames are moved on trolleys. The trolleys are currently still manually driven into the cell, but the idea is that we will eventually be able to control them by remote so that the operator no longer has to go into the cell. We also developed the clamping system for which we use the air cylinders from the group's bus construction operations. All in all we've succeeded in being able to change a complete frame in three minutes."

Cooperation with programming

The use of the welding robot system calls for more programming know-how. Experiences are exchanged with other VDL companies for this purpose. "They are now helping us with the programming of the new modules. The intention is to put all junior programmers in



Division of VDL Bus & Coach

VDL Bus Chassis assembles the complete bus chassis in Eindhoven, the steel components for which are supplied by other VDL companies in the group. VDL Bus Chassis is the supplier for the VDL Bus & Coach division, which builds its buses in Heerenveen, Valkenswaard (NL) and Roeselare (BE).

Chassis are also exported to customers outside of VDL Bus & Coach.

www.vdlbuscoach.com

Valk Welding participates in Fieldlabs

During the past 1.5 years a number of Fieldlabs have been set up in the Netherlands, the purpose of which has as purpose to feed Smart Industry/ Industry 4.0. Smart Industry makes it possible to set up production processes more efficient, flexible and sustainably and with more customisation. This leads to new production methods, new business models and new sectors, which creates new opportunities for the manufacturing industry. Given its expertise and experience in the field of robotics and the integration of digitization, Valk Welding is now closely involved in 2 Fieldlabs, which have already produced concrete results.

Fieldlabs
supports SME's
innovation
processes

Examples of Smart Industries are industries that have set up extremely flexible production capacity through extensive digitization and are therefore able to profitably provide 'customised' products and services for all of their customers (mass customisation).

Production processes can be made faster and more efficient

Innovations in the field of digitization, robotics, sensor technologies, sustainability and 3D printing make it possible to make production processes faster and more efficient. This can speed up the availability of products (shorter delivery times), improve quality and possibly reduce the cost price.

Valk Welding has completed a number of projects in this area in recent years, and companies are now able to produce single items in an automated setting. Linking data, robotics and the use of sensor technology play a vital role in this.

Making new technologies accessible for the SME sector

New technological alternatives present new opportunities for the manufacturing industry in general and the SME sector in particular. But seizing these opportunities calls for plenty of knowledge of these new technologies. It is a challenge for the SME sector in particular to get hold of this knowledge. The Fieldlabs currently being set up throughout the country will act as a driver for Smart Industry and will help the SME sector to implement new technologies.

Fieldlabs are practical settings in which companies and research institutes develop, test and implement smart products and technologies. There are currently 15 Fieldlabs in the Netherlands, targeting specific regional clusters and sub-processes. With its knowledge and experience in the field of robotics and Smart solutions in the automation of welding production, Valk Welding is closely involved in the Sustainability Factory and Additive Manufacturing Fieldlabs.



Innovation focus on the maritime industry

Fieldlab Additive Manufacturing

The Additive Manufacturing Fieldlab at the RAMLAB (Rotterdam Additive Manufacturing Laboratory) at the RDM campus in Rotterdam was set up to continue the development of 3D metal printing of unique and often larger parts using welding robots. RAMLAB is the second Fieldlab in which Valk Welding is taking part.

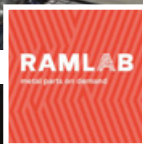
Seaport-related companies work in this Fieldlab together with research institutes on the development of knowledge in the field of metal 3D printing, 3D scanning, 3D design and certification. Their aim is to produce parts for replacements and repairs in ships and offshore installations on demand, in order to greatly reduce the delivery times of these products. Downtime affecting ships and offshore installations forms a large cost item in the seaport-related industry.

The welding robot that Valk Welding has developed for 3D metal printing forms the basis for this. The technique of 3D metal printing with a welding robot is based on the Wire Arc Additive Manufacturing (WAAM) technology. The welding robots are able to weld 1 to several kilos of material an hour using standard welding wire. This makes it possible to produce bulky parts of up to around 2 x 2m at lower cost and more quickly than with current technologies.

Concrete results

Maritime companies such as Huisman, Heerema and Keppel Verolme are taking part in this with concrete examples of products. The first parts that were successfully printed with welding robots are a triple-curved part inspired by a blade of a ship's propeller and a lifting hook.

Parts like this would normally be machined and finished from a casting. It would usually take weeks to several months for a cast component to be delivered. The welding robots completed the test piece within a few hours, after which it was machined and polished.



Sustainability Factory – project TIMA

The first Fieldlab to which Valk Welding is devoting its knowledge and experience in the field of welding robot technology deployment is the Sustainability Factory. This is the Fieldlab running the project 'Applied Innovations Maritime Automation' (TIMA), in which the Sustainability Factory in Dordrecht is working with partners on the development, prototypes and testing of new methods for the production of ship's and ship's components. The technological innovations are found mainly in the ability to automatically weld large ship's components based on CAD data.

The Fieldlab project TIMA also has a social and educational aspect. This aspect centres on the question "How do we get older employees on board with new processes and automation?"

The project has a term of 3 years, six months of which have already passed. The participants expect to be able to present the first tangible results after two years.





SWEDEN

Höganäs Verkstad unique in the region with a welding robot for small series

Dag Richardsson: "Now we are a supplier who can deliver certified welded products with the robot"



Swedish supplier wishes to use a welding robot to resh

Despite a high robot density in Sweden, the country has very few suppliers who use a welding robot for small series. The Swedish supplier Höganäs Verkstad is an exception though. The company is in a unique position thanks to the introduction of a Valk Welding welding robot installation and the fact that they have a machining

department under the same roof. Höganäs Verkstad is now able to deliver certified welding work for small series with a high and consistent welding quality. CEO Dag Richardsson: "We can now deliver certified welding work at a competitive price. This way, we hope to bring work which is now done abroad back to Sweden."

Höganäs Verkstad acquired an order for the replacement of trusses for road signs above Swedish motorways, because the existing constructions no longer meet the latest EU guidelines. Dag Richardsson: We were one of the few companies able to deliver these trusses in accordance with EN-1090. In view of the large quantities and the large degree of variation involved, we immediately started looking into the use of a welding robot. At that time, we had absolutely no experience with welding robots and it's peripheral equipment, the product was quite complex for robot welding. Thanks to the possibilities they offer for offline programming and weld seam detection, we quickly turned to Valk Welding. A reference visit to Henjo, another Swedish supplier, together with Valk Welding's sales representative was decisive for us."

Easy programming

"When you use a robot to weld small series, the programming time must not be longer than the time needed to weld the product by hand. This requires an offline system, which is quick and easy to use. We believe that Valk Welding offers the best



possibilities for offline programming. With DTPS, their offline software, it is possible to use the welding robot for a variety of series sizes. Partly thanks to the useful tools, the software takes over a lot of work from the programmer, so that even difficult-to-reach positions can be programmed quickly and easily. Valk Welding delivered the welding robot installation, including





Höganäs Verkstad arose from the former workshop of the 250-year-old Höganäs AB, which is a world player in the field of iron powder. In its 7.500 m² facility, Höganäs Verkstad has the ability to perform machining, grinding, hardening, blasting, repair and welding work with its 50-man workforce. www.hoganasverkstad.se



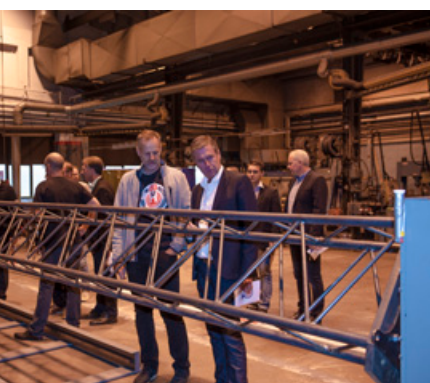
www.youtube.com/valkwelding:
A customers journey into welding automation



access to every position on workpieces up to a maximum length of 12 metres. All the products are MAG welded. "A second important requirement we had was a quick and effective weld seam detection routine. As a result of the large number of variations and differences in tolerances, there was a large risk of the robot welding next to the seam. Valk Welding uses its own 'Quick Touch' wire detection system, which immediately alters the program for all the dimension deviations that are found. It is a perfect system, which causes the welding robot to follow the weld seam exactly," says Dag Richardsson.

Looking for new business

"The production of the trusses is the first order for which we used the welding robot and we are now looking for new business. We can tap into new markets, which is good for the company's growth. The fact that we have a machining- and a welding-department under the same roof, makes us unique in Sweden and it allows us to deliver certified welding work of a high quality at a competitive price," explains Dag Richardsson.



the programmes for an initial series totalling 400 trusses. Valk Welding DK was very supportive during the starting period. After that first period, we were able to programme the variations ourselves," explained



Dag Richardsson.

Seam tracking

The Panasonic TM-1800WG3 welding robot moves along a 14 metre track. In combination with the manipulator, it has optimal





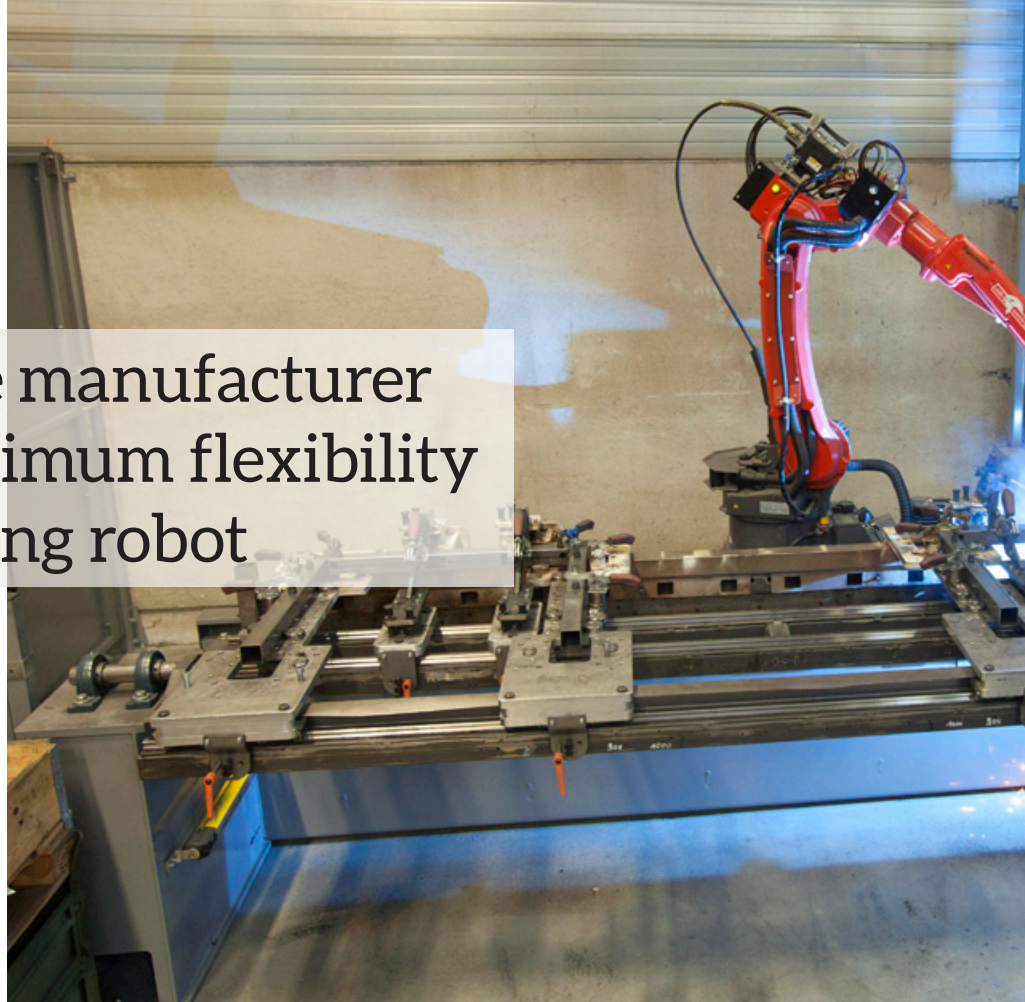
BELGIUM

Office furniture manufacturer looking for maximum flexibility with new welding robot



ROBBERECHTS

Jef Van Gael, Manager: "Price and delivery are important aspects when it comes to maintaining a competitive edge in this market."



Office furniture manufacturer Robberechts in Turnhout, Belgium, is planning to further optimise the flexibility of its production processes to deal with its large number of product variants. For this purpose the company recently commissioned 2 new welding robot cells, with the programs for the welding robot being generated on the basis of CAD data. The next step is to servo-mechanically automate the configuration of the welding jigs. Jef Van Gael, Manager, CPIM Production, Investments, Product and process development: "Price and delivery are important aspects when it comes to maintaining a competitive edge in this market."

Robberechts recently delivered an order for 1,200 cabinets, desks and drawer units within 4 weeks, some of which customised. "That mustn't happen too often, but it does show what our company can do", says Jef van Gael. With office furnishing as our core business, the manufacturer produces some 20,000 office furniture units under private label for the professional office trade in France and the Benelux. The legs for these units are made in 250 variants, and the frames also vary in width and height. Each variant requires a separate welding program and a separate welding jig configuration. Jef Van Gael: "Until recently we did this manually using the teach pendant. It might be possible to quickly call up recurring programs in this, but you can only programme a new product when the welding robot is not in production. Panasonic DTPS software makes it possible to do this completely outside of the robot."

Large variation within the same family

The differences in the measurements of the tubular legs and frames for the workplace furniture may be small, but each size difference in one of the tube sides needs another welding program. "When we made the investment in new Valk Welding robot systems we therefore switched to offline programming software with Panasonic DTPS software. This has greatly increased the working time on the welding robots, but the programming time for all variants still accounts for a lot of time spent on the work preparation. "Valk Welding can offer their APG solution to automate the programming, but we have seen a way of developing this ourselves with our own software", explains Jef Van Gael.

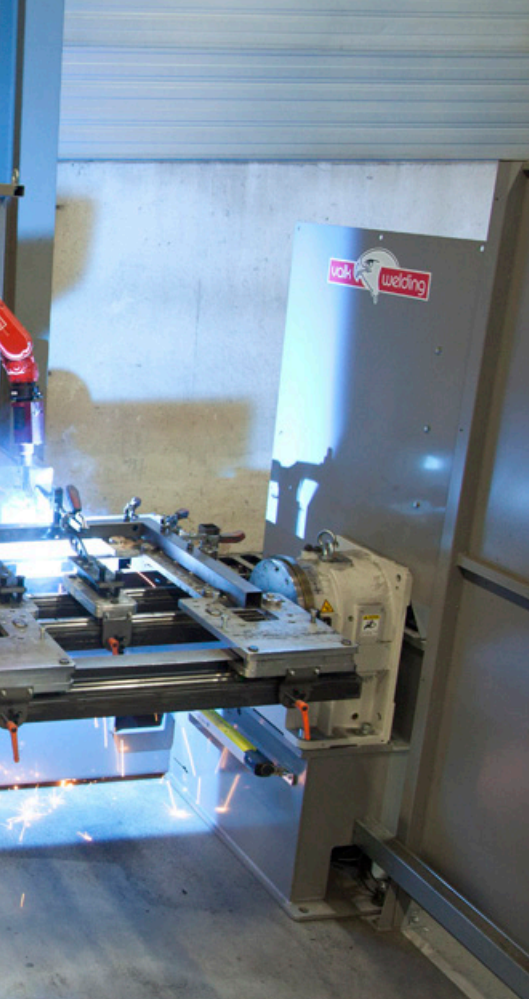
Geometrics from CAD data

The tubes are pre-cut with tube lasers, with a triangle cut out on three sides so that the welding robot operator can simply bend the

tube 90 degrees. The U-shaped legs are then clamped onto the jig so that it can be welded on three sides by the robot. The welding programs are based on the CAD data geometrics, for which a different welding torch position is programmed in the Robberechts software for the internal and external angle. The positions are linked to the right welding parameters in DTPS. We started with APG for the automatic programming but have since developed our own application for this. All in all this saves a lot of programming time on the job preparation", emphasises Jef Van Gael.

Two identical welding robot cells

Robberechts still had a Valk Welding robot system dating back to 2000, with 4 stations served by 1 welding robot. Jef Van Gael: "The old Panasonic AW-660 (from 1990) was due for replacement. To get everything completely up-to-date we invested in complete renewal in order to work with the latest state of technology. Instead of 1 welding robot system with 4



stations we opted for 2 identical welding robot cells, each with 2 stations. This arose from the idea of always duplicating strategic production processes so that there was no downtime in the event of production malfunctions. Also, having 2 welding robot systems gives us more space for loading and unloading."

Universal jig and Siegmund table

Of the two parallel stations, one station has a universal jig and the other a fixed Siegmund table. Both stations are fitted with controllable work piece positioners. A Panasonic TM-1800WG over an 8 m track serves both stations in alternation. Jef Van Gael: "The universal jigs can be used for parts that are used in many furniture items. We therefore make them in series of 100 to 1,000. We use the Siegmund table for unique pieces. That way we retain maximum flexibility."

Automatic welding jig configuration

The operators currently set up the jigs manually. Jef Van Gael: "For minor width differences this means that the operators now mechanically adjust the clamps. Despite the implemen-

tation of a quick change system, we would ultimately like to also automate our system by servo-mechanically implementing the clamp configuration, with the configuration linked to the welding robot programs. Once we've done that we'll also be able to have single pieces welded on the robot."

Looking for similar products

The extensive digitisation of new works has sharply reduced the demand for cabinets in offices. Jef Van Gael: "That's why we're looking for similar products that we can make out of steel for hospitals, schools and so on. But office furnishing remains our core business. With our current production method the future is looking rosy. The new welding robot systems in particular make it possible for us to produce competitively and in high quality, without compromising flexibility."

www.robberrechts.be



Young potentials take on robot technology

Until recently professional technical education programmes only barely connected *verwijderen* with current professional practice, which often uses newer technologies that are not yet covered by technical education. The business community, educational institutes and public authorities have therefore launched various initiatives to improve the connection between technical education and professional practice. During the past three years regional training programmes have been started at various locations in the Netherlands, with the use of robotics forming part of the curriculum. Regional Training Centre Da Vinci College in Dordrecht is one of the many technical training institutes where students are now learning to work with Valk Welding robots at the Sustainability Factory. At the Sustainability Factory students learn to work with modern production technologies that produce more with less energy consumption. In that respect welding robots make a contribution to sustainable production. Students are also able to work on actual assignments from companies.

First students now working at Valk Welding

Jan van Persie is the first student now working at Valk Welding under this training programme. "I've learned a lot from Higher Profession-

al Education graduates at the Sustainability Factory, and also from Valk Welding assignments. That has helped me to get my first job, which involves a combination of 4 days' work and 1 day of school. I want to continue to develop at Valk Welding as a robotics specialist", says Jan van Persie. Jan inspired his fellow-student Marcel Jobse to come and work at Valk Welding as well. There are also students from other training programmes who will be working at Valk Welding after completing their traineeships or graduation assignments. Adriaan Broere (managing director of the Valk Welding group) started at Valk Welding after completing his traineeship.

Directly employable

Valk Welding contributes to the training programmes by having its own personnel give guest lectures. Remco Valk: "We would like to see the young generation of technicians in the region being trained with the equipment we assemble here. A training programme at the Sustainability Factory in combination with



from left to right: Jan, Marcel, Marc, Job, Siebe and Roaldo

working with us is a great partnership. The advantage is that these students are directly employable. Young people are the natural source for the intake of new technicians. Young people have grown up in the digital world and look differently at certain things because they've never had to face the obstacles of the past."



BELGIUM

Faymonville welds complete chassis with robot

After having welded sub-assemblies on robots for many years, Faymonville, which manufactures semi-trailers for heavy haulage, has now commissioned a large welding robot system to weld complete chassis. This has enabled the company to greatly improve the efficiency of its small series welding production, to maintain its competitive edge in Belgium and to strengthen its position in Europe.

Yves Faymonville: "Welding is a crucial part of our production."



Employing 760 people over 5 locations in Belgium, Luxembourg, Poland and Russia, Faymonville produces over 2,000 units a year. The company specialises in customised trailers for exceptional transport, which are built in a large variety. The COMBIMAX is the latest concept: a semi-trailer system for heavy haulage made up of standardised modules. Faymonville thus offers a semi-trailer system that can be flexibly assembled according to customer requirements. Together with the universal coupling, this concept is unique and revolutionary in the world of transport.

Designed for welding robot technology

Yves Faymonville, COO and co-owner: "Welding is a crucial part of our production. That's

why we've been using Valk Welding robots for 20 years for the welding production of "smaller" components up to 1,500 kg. The introduction of COMBIMAX brought to the idea of using the robot to weld complete assemblies. Each module is therefore designed to be welded with the robot." The COMBIMAX modules are still being welded by hand at the moment, but since the market launch we've been working on the concept for a new welding robot system.

8.5 x 27 metre welding robot system

Valk Welding ultimately built a welding robot system consisting of multiple stations so that the robot could also weld sub-assemblies during the chassis changes. The overall system measures approximately 8.5 x 27 m, conform

CE specification.

The large and heavy chassis are positioned using two synchronously driven positioners that are able to handle a total of 10,000 kg with a total chassis length of 12 metres. Two welding robots are mounted on a gantry structure based on the XYZ concept, so that all welding positions are optimally accessible. In view of the heavy transport on public roads, welding quality is of major importance to Faymonville. That's why that's why we apply the 'deep penetration' welding process, which comes as standard with the Panasonic WGH robots. This guarantees very deep penetration, so that the welding seam preparation can also be adapted in such a way that the welding costs are greatly reduced. A perfect welding position is of major importance here,





which is why a system with a total of 22 free programmable axis has been chosen.

Offline Programming

Offline programming was necessary in view of the very small series and sizes/weights of the products. This was also one of the decisive reasons why this project was carried out together with Valk Welding. Both the ease of use of the software and Valk Welding's know-how are of great importance. The DTPS software is the common thread running through the ongoing evolution towards greater flexibility.

Thick plate

The heavy-duty constructions calls for both intelligent search algorithms to stay within the product tolerances and multiple-layer welds

in virtually all cases. Traditional programming would take up a huge amount of time. Panasonic offers "Thick Plate Software Solutions" especially for applications such as these. Faymonville uses this software to programme a new product every day and is based on Faymonville's experience which is unique in it's class.

Staying competitive

The welding robot system is installed at the Belgian facility. Yves Faymonville: "The high salary costs make Büllingen our most expensive production location. The best way to overcome this situation was to increase robot welding. We have been able to greatly reduce the turnaround time and delivery times, and have also achieved cost

savings. Valk Welding has done this for us from design to implementation, and also provides after sales support."

Throughout Europe

The Faymonville trailers are sold worldwide via a dealer network. Faymonville even has an establishment in Russia. Yves Faymonville: "We're planning to assemble a specific type of low-loader there, making the sub-assemblies for this here."

www.faymonville.com



SCOTLAND



Simon Harrison: "Valk Welding is a fabulous company"

Had-Fab Ltd., which employs 145 people and which is one of the largest suppliers in the south of Scotland, is using a Valk Welding welding robot for a large order for the renovation of the London Underground. "We could not find enough people to weld 15,000 brackets. For such a quantity, it is much better to use a welding robot, anyway. Valk Welding's robot system and offline programming, combined with the personal approach, offered us the best starting point. We are now going to increase the use of welding and cutting robots," explained Managing Director Simon Harrison.



Scottish customer Had-Fab: "Robotization will shape our future"

Had-Fab designs, manufactures and constructs steel and aluminium constructions, mainly work extensively in the Power transmission and distribution industry as well as the rail and telecom sector. The supplier constructs pylons, towers and bearing structures, as well as secondary steel constructions, such as stairways, ladders and bridges, for these sectors. Had-Fab recently acquired an order to weld 15,000 brackets for the renovation of the London Underground. "Nowadays, there is almost nobody who looks at such a quantity as a challenge. For that reason, we decided to invest in a welding robot. While looking at what the well-known robot integrators had to offer, we kept running into the same problem," said Simon Harrison.

All-in-one system

Voortman's UK dealer advised Simon Harrison to talk to Valk Welding. Simon Harrison said, "I went to see Valk Welding at the EuroBlech

trade fair in Hannover and told them what I was looking for. Their approach and their all-in-one system immediately appealed to me. In particular their offline programming system, in which you can program the robot, engineer the welding fixtures and plan the production, ensures that you make optimal use of the welding robot. Since they had a welding robot on an H-frame construction in stock, we were able to get started reasonably quickly. When we collected the installation in Alblaserdam, we were also able to take a look behind the scenes at Valk Welding, and that reassured us that we had taken the right choice.

A challenge for young employees

Simon Harrison believes the technology and everything involved with the process of welding robotization are things that excite young employees. "They have experience using computers and see it as a challenge to program the welding robot, design the wel-

ding moulds and start and control the entire production process. That allows you to give young employees a chance to gain experience and knowledge of new technology," explained Simon Harrison.

Personal approach

Harrison found Valk Welding's personal approach friendly and honest. "It is a company that is a pleasure to do business with. The combination of a personal approach and the technology that the company has to offer makes Valk Welding a fabulous company," said Simon Harrison.

The robot project is to be continued

The welding robot on an H-frame construction is currently only used for the welding order for the suspension brackets, but after that, it will be used for other products. "And that will not just be large series. We also want to start using welding and cutting robots for larger

French market playing catch-up



**Remco H. Valk
about Brexit**

Remco H. Valk still sees plenty of opportunities for delivering welding robot systems in Scotland, Ireland and England. "Besides the fact that it is becoming increasingly difficult to find local people for welding work, cheap labour will also be harder to come by as a result of Brexit, because a residence permit will not be so easy to get hold of anymore. As a result, there will be much fewer welders who are willing to work for a low hourly wage due to the exchange rate of the pound and the need for welding robots will increase accordingly," expects Remco H. Valk.



Artwork in Lelystad built by Had-Fab

Had-Fab also made the image 'Exposure' on the embankment in Lelystad (the Netherlands). 'Exposure', in the form of a crouching man, is a creation of the British artist Antony Gormley. The entire structure weights 60 tons and is entirely made at Had-Fab in Trenent (near Edinburgh) and shipped in parts to Lelystad and built up there in 2010.

products. The initial discussions have already taken place with Valk Welding."

www.hadfab.co.uk

When Valk Welding France started operations in 2013 the workforce was expected to increase from 10 to 15 people during the next 5 years. The activities and the sale of welding robot systems to French companies have now increased so sharply that the number of employees occupied with the French market on a day-to-day basis is already approaching this staffing level. Michel Devos, branch manager of Valk Welding France, identifies the technology and the approach Valk Welding takes to helping companies in the other European countries with their robot technology as the most important reasons for this growth. "Valk Welding has given a large part of the French market a wake-up call."



(left to right): Michel Devos, Anaïs Luel, new back-office assistant, Quentin Carvalho, new employee sales support and Etienne Chombar.

While Valk Welding was focusing on developing solutions for the flexible automation of welding production, French robot integrators were concentrating more on large series production, such as in the automotive industry, than on smaller series in the French SME sector. Valk Welding saw this as an opportunity to fill the gap and offer the French SME sector its expertise and systems. "French SME companies weren't often aware of the possibilities offered by flexible automation. The French manufacturing industry was also being confronted with declining series sizes, just-in-time delivery and production to order. While Belgian and Dutch manufacturers and suppliers had already tailored a large part of their robot automation to this, French SME companies are still lagging behind in this area. Focusing on flexible welding robot automation opens up great potential for Valk Welding France," explains Michel Devos.

Single point of contact for the entire project

"French companies also regard our "everything under one roof" formula as being unique: a single point of contact for the entire project, including after-sales service. The same applies to the hardware: both the welding robot and the power source form a single, fully attuned system, to which we

have added our robot torch, torch holder, calibration system and even our own laser camera (Arc-Eye) as a unique tool," explains Michel Devos. "Also, as a family-owned SME with short lines we have a limited hierarchy and fewer internal formalities than most French companies, which enables us to work more decisively and responsively.

Devos mentions MIC Tolerie as one example of a French company that produces small series and that had already been looking for an automated solution for many years. The company found Valk Welding via an article in a trade journal. "Valk Welding was finally able to meet that requirement. This is something we'd spent years looking for," says Régis Porcher from MIC Tolerie.

Sharp growth within 3 years

Valk Welding France has now substantially extended its organisation to serve more French companies. A workforce of 15 people is now dealing with the day-to-day business concerning the French market. Back-office, service support, software support, demos and sales are provided completely independently at Valk Welding France's establishment in Lacroix-Saint-Ouen. "We produce our own offers and contracts - only the support and construction of the systems are taken care of in the Netherlands," explains Michel Devos.

Automotive industry also calls for flexibility

POLMOstrów produces a wide range of exhaust systems in small series

Robot automation is already well-established in Poland's automotive industry. This is precisely why in this sector that robot automation is virtually a must when it comes to keeping quality high and delivery times short. Poland's POLMOstrów, the largest exhaust system manufacturer in Central and Eastern Europe, engaged Valk Welding robots as far back as five years ago, which enabled it to build up a competitive advantage. Eight Valk Welding robots are now working 'arm in arm' 24/7 at the production plant in Ostrow.



POLMOstrów produces and delivers exhaust systems and has been operating in this market for over 40 years. Production ranges from 8,000 to 10,000 units a day. That amounts to a steel consumption of 60 tons a day. "Our range comprises around 3,000 models and components", explains Marek Stefanski, engineering manager at POLMOstrów. "A broad range such as this means that you have to set up production for a large variation and small series. Quality and delivery times are of highest importance to our clients. The procedures for reproducing the products and guaranteed delivery times are very sensitive aspects in the car industry."

Consistent quality

The skills of employees play a vital role. "It's now very difficult to find qualified personnel, especially welders", says Marek Stefanski, and continues: "Relying on the skills of employees involves a big risk. The repetition accuracy of the products is determined by the ability of the employee. Different employees take a different approach to the details, are slower than the robot and can't work every day of the week. That's why we started thinking about robot automation at an early stage."

Comprehensive selection procedure

There is no room for trial and error in the car industry, where the competition is always hot on your heels. The selection of a reliable supplier of industrial robots is therefore preceded by a comprehensive selection and test procedure.

"The decision to robotise was taken when the company was employing about 600 people, of which 200 welders," says the engineering manager. "The choice of a welding robot system supplier was preceded by an in-depth analysis of the technical options and the supplier's competencies. Welding exhaust mufflers involves thin-walled parts and short welds. After a number of successful tests carried out at the Valk Welding demo centre in the Czech Republic we decided to continue working with this robot integrator", says Marek Stefanski.

Flexible system

We wanted to implement a comprehensive system that we could use to weld both existing and new products using our own hardware and software options. "We provided a simple configuration consisting of a robot with two workstations fitted with positioners," explains Jakub Vavrecka, branch manager of Valk Welding CZ. "One of the client's important requirements was maximum flexibility when it came to quickly retooling for another product. We recommended using Quick Touch (wire tracking) to cover the dimensioning tolerances", explains Jakub Vavrecka.



Service technician Poland

After the start of sales activities in Poland, Thomas Pyka, branch manager Poland, did much pioneering work on the Polish market. With support from Valk Welding CZ s.r.o. the number of welding robotsystems delivered to Polish companies increased sharply. Remco H. Valk: "The order intake is going well, including a large order for four welding robotsystems we will deliver this fall at a Polish company on the eastern border. A reason for us to strengthen our team with a local service technician for the maintenance and cooperate in the deployment of all Valk Welding installed in Poland."



Marek Stefanski agrees: "When we started the partnership with Valk Welding we still weren't completely sure what to expect. The first welding robot was successfully put into operation in 2010. Valk Welding provided the programming and the welding jigs for the first products. For the next products we took this on ourselves so that we could independently extend the number of products on the welding robot step by step. The Valk Welding concept gave us maximum flexibility. In the years to follow we extended the number of welding robots to the current 8 systems."

Service support and spare parts

Marek Stefanski also underlines the professional cooperation following installation of the welding robot cells. "After-sales service not only involves training personnel to take the welding robots into use, but also for training after staff changes. The robot maintenance was also perfectly arranged. That's what the parts depot at the plant in Ostrow was set up for." That means that all of the parts needed for standard maintenance are immediately available. The supplier can

supply the rest from stock. "We're a company that can solve a lot of things for ourselves", says Marek Stefanski. "We're very pleased with the smooth partnership with Valk Welding", he adds.

Long-term partnership

"We take the view that our experience and cooperation with the manufacturing industry are what make us able to economically adapt our range to customer requirements making use of the opportunities and advantages of robotics", says Jakub Vavrecka.

POLMOstrów is the only exhaust system manufacturer in the region using robots. That gives POLMOstrów its competitive edge!

"Together we have succeeded in optimally setting up production. I'm convinced that this has contributed to the success of POLMOstrów as a company", he adds.

www.polmostrow.pl

The quality and speed of the robots are the most important aspects to POLMOstrów

Belgian ambassador visits Valk Welding



During a visit to the innovative manufacturing industry and the maritime sector in the Drechtsteden region at the beginning of this year, the Belgian ambassador, Mr Chr. Hoornaert, paid a visit to Valk Welding. Together with the trade delegation from Flanders and members of Drechtsteden council the ambassador was exploring the options for more cooperation with innovative companies with a link to the maritime sector. Belgium and the Netherlands are already working together in this area. Valk Welding is one of the highly future-oriented companies with close links to Belgium based on trade or Belgian operations.



General Manager Adriaan Broere gives Mr. Chr. Hoornaert instructions to program the welding robot

After introducing the company CEO Remco H. Valk and director Adriaan Broere of Valk Welding gave the group an inside look into the scenes of welding robotics. Valk Welding has been supplying welding equipment and, later, robot systems in Belgium for over 50 years, and with nearly 1,000 installed welding robots in Belgium has deep roots in the Belgian manufacturing industry. "With companies such as Oceanco, Damen Shipyards, Heerema and suppliers, the shipbuilding industry in particular is strongly represented in the Drechtsteden region. The 'one of us' mentality that characterises the region goes some way to explaining the sharp focus on regional cooperation. Companies in the region are joining forces to continue to strengthen the sector with innovative technologies. Cooperation with Belgium in the maritime sector offers the region new opportunities", concludes Remco H. Valk.



Tradeshows

Technische Industriële Vakbeurs

Hardenberg, Netherlands
19-21 September 2017

Schweissen & Schneiden

Essen, Germany
25-29 September 2017

MSV

Brno, Czech Republik
09-13 Oktober 2017

Metavak

Gorinchem, Netherlands
31 Oktober - 2 November 2017

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The strong connection