

50
FIFTY
YEARS

PRISMA

The WILD Group
magazine



**WE OWE IT TO
THE FUTURE.**

▼ WILD
▼ PHOTONIC

PRISMA | ISSUE 1 • 2020

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SUNDAYS FOR FUTURE.



Josef Hackl
CEO WILD Group

Instead of skipping school on Fridays, our staff make the rounds through the WILD Group sites on Sundays after the end of each working week. Their mission in the peace and quiet of Sundays is to detect unnecessary energy consumption and eliminate it in the following days.

This is just one of many measures we have introduced, which have allowed us to significantly reduce our energy consumption, despite increasing sales. It is our obligation to act now and not wait for the big decisions to come from the government. It is in our hands to meticulously solve the numerous challenges that lie ahead. These include reducing power consumption, avoiding hazardous waste, substituting heating oil, or resorting to web conferences that have less of an impact on the environment. Ecology and economics are perfectly compatible with each other! Finding holistic solutions for both lies in the management's and every employee's "responsibility for the future". The article on page 4 describes how WILD addresses this major challenge.

Another one of our future themes is 3D printing as an additive manufacturing process. We cite two current customer examples to demonstrate how WILD is promoting progress in this area. A young high-tech company in Vienna proves that great things can be quite tiny, and that you can build a huge number of nanostructures at "just" 20mm³ per hour. Setting up a serial production of 3D metal printing parts on a stable basis requires innovative quality assurance solutions and WILD is capable of delivering these.

This year, in celebration of our 50th anniversary, the back cover of PRISMA will feature a story from the past and the current issue will be introducing the theodolite, a genuine "time witness" of our exciting company history.

Enjoy our newly designed PRISMA!

Josef Hackl



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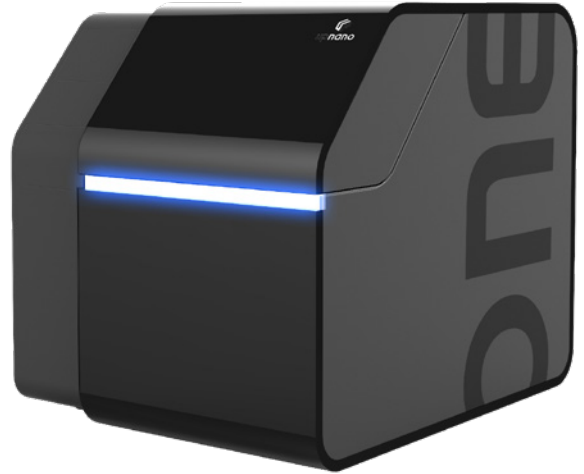
ANYTHING BUT OVERSIZED.

Serial production of top-quality microparts is now possible with the ultra-fast, high-resolution 3D NanoOne printer. WILD helped in the construction of the casing and contributed its optics expertise.

Manufacturing micro to meso-sized high-performance components is an extremely demanding process that quickly brings conventional 3D printing techniques to their limits. The NanoOne heralds a new era of additive micromanufacturing. For the first time, the patented technology of UpNano GmbH can print plastic components with structural details as small as 100 nanometres. In combination with a processing speed 100 times faster than conventional high-resolution 3D printing systems, this technology also offers the opportunity to work with living cells. These can be gently built into the 3D structure or placed on sterile, prefabricated structures. Understandably, there is an enormous amount of interest from medical research and Industry 4.0, which relies heavily on miniaturisation.

SMALL, FAST AND POWERFUL

The young high-tech company from Vienna, which received several research and science awards last year, uses the two-photon polymerization (2PP) technique for its high-resolution printing system. This technique uses femto-second laser pulses to harden photopolymers directly in the volume of the material. This allows for the printing of finest structures in different forms and sizes. The company managed to increase printing speed to up to 20 mm³/h, thus allowing for the economically viable manufacture of microparts for the first time. At the same time, WILD and its WIN partners helped optimise the design of the NanoOne system, so that it can now be used as a desktop system even in the smallest laboratory. This required a redesign of the optical path, causing a chain reaction of modifications. The challenge was managed in weekly meetings, in which WILD coordinated the development steps with the customer, and where new solution approaches from the



WIN partner network and the customer's engineers were devised and implemented. "We are currently discussing the transition of the device into serial production", says WILD Business Developer Markus Woschitz.

BIOCOMPATIBLE PRINTING

Connecting an incubator to the NanoOne will also allow it to print biomaterials such as combinations of polymers and living cells. This can be used, for example, in three-dimensional in-vitro cell tests, which are increasingly in demand in cell research, tissue regeneration and in the pharmaceuticals industry. The NanoOne has been successfully used at the Medical University of Vienna since 2019 and supplies research departments with micro and meso-sized components.

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WE OWE IT TO THE FUTURE.



The daily work routine of WILD staff members proves that, by using energy and resources responsibly, the sum of several small adjustments can make a great difference.

INTERN

4

For more and more customers, the environmental footprint of a product is becoming increasingly more important in addition to its functionality, innovation and longevity. For this reason, as a contract manufacturer, the WILD Group has been pursuing a comprehensive sustainability strategy for years, focusing on environmental challenges and energy-saving potentials. The Group's declared aim is to make a significant contribution in keeping the ecological "backpack" of each product as light as possible as early as during the manufacturing process.

ALL EYES ON THE ENTIRE SUPPLY CHAIN

Among the systems partner's main areas of focus are the generation, transformation and distribution of energy.

"By analysing the potential in all areas of our business activity, from manufacturing to disposal, we have searched for ways to save energy and contemplated on how we can minimise our negative impact on the environment", Production Manager Mario Pföstl explains.

Companies who want to operate responsibly must adopt a very comprehensive view and have an exceptional staying

power. Sustainability is not a project in which one works toward a specific end. It is a philosophy deeply embedded in the company, which measures success not only in pure figures.

"At WILD, both the products that come out of the factory and the production processes as such are very environmentally friendly. In combination with the low environmental impact, the economic savings achieved through the various environmental protection measures introduced in recent years are moderate. We introduced these improvements, however, as a matter of principle. And we do that very consistently", stresses WILD Group CEO Josef Hackl.

50 PERCENT LESS HAZARDOUS WASTE

Nevertheless, WILD's comparison figures are impressive. By focusing, among things on the disposal of dangerous agents such as cooling lubricants, the company managed to reduce the share of hazardous waste by 50% in just one year. "There will be another 20% reduction in 2020", predicts Mario Pföstl.

Moreover, last year WILD replaced all paint booths with new ones equipped with a modern exhaust air system, which ensures that paint sludge disposal can be fully eliminated. Another conversion to a new, longer-lasting type of cooling lubricant resulted in a 75% reduction of the amount disposed.

Electricity consumption also dropped by 4% last year, despite the fact that added value increased by 4% in the same period. These savings can be attributed, among other things, to seemingly simple measures such as regular energy checks. These are carried out on weekends, during which WILD staff detect, document and discontinue any sources of energy wastage throughout the entire company. These can range from leakages in the pneumatic system to computers and systems that are not shut down properly.

The largest reduction of CO₂ emissions at WILD so far was achieved by converting the heating system from oil to woodchip-fired district heating. This clean, climate-friendly heating has been used in the company since 2018 and not only as a source of heating. "In addition to the environmental aspect, a constant heating supply in particular is an essential factor and a mandatory quality criterion for our production process. Surface treatments such as special paints, for instance, require precise, constant processing temperatures, which district heating can guarantee throughout the year", Josef Hackl argues.

CONSTANT IMPROVEMENT CYCLE

Significant energy indicators such as electricity and heating costs are recorded each month to identify any improvements. These digital values are always considered in relation to value



At WILD, both the products that come out of the factory and the production processes as such are very environmentally friendly

Josef Hackl, CEO WILD Group

creation in production. "As a result, we find ourselves in a constant improvement cycle, in which all staff are involved.

After all, many of these optimisation measures come from the company's ongoing suggestion-book system", Pföstl explains.

Further optimisation measures have been planned for 2020. For instance, there will be improvements in the supply air system in mechanical manufacturing so that the waste heat from these facilities can be used to heat the production hall. In the summer, WILD will also implement an optimised ventilation system to ensure the constant supply of fresh air.





THE POTENTIAL IN OUR OWN RANKS.

Reinhold Kordesch and Patrick Weinzerl are the new Assembly Managers for Medical Technology and Optical Technologies.

In the search for the best minds, companies are increasingly resorting to their own ranks. Therefore, targeted talent management is today one of the most important factors in maintaining a competitive edge. The WILD Group also believes that developing and promoting its existing staff is the best way forward. "We offer leadership programmes for high-potential employees at regular intervals", explains WILD Human Resource Manager Andrea Gritsch. In recent years, for instance, most group and team manager vacancies in the assembly division have been filled by people from inside the group. The latest examples are Reinhold Kordesch and Patrick Weinzerl, recently appointed as assembly managers in medical technology and in optical technologies respectively. They both qualified for their new leadership positions through targeted training and upskilling, their enthusiasm for the job and trusting relations with their colleagues.

INTERNAL CAREER LADDER

Reinhold Kordesch's professional background is typical for the WILD Group. He started as an apprentice in 1988, spent several years gathering experience in various assembly areas and eventually qualified as team manager by attending various training and upskilling programmes. Patrick Weinzerl, too, began nine years ago as assembly worker in optical technologies, working his way up to the position of group manager in almost no time. In addition, he took part in some

significant training and upskilling programmes which led to his current position as assembly manager, including the Green Belt and Leadership Programme.

As Andrea Gritsch assures: "Leadership culture is the result of decades of work. It requires values and attitudes based on equality, yet also transparency and basic democratic decision processes, in which the team and its team managers are involved in decision-making and change as much as possible.

Leadership culture is the result of decades of work. It requires values and attitudes based on equality.

Andrea Gritsch, WILD Human Resource Manager

A corresponding human resources management must prepare the ground for that to happen. There will be quite a few changes at WILD in this respect, with new HR software being currently implemented. In future, this interactive communication will further improve networking between employees, executives and the HR team

of Andrea Gritsch. The new tool will illustrate development opportunities, training and upskilling requests, or other personnel changes with greater clarity and transparency. However, the focus will remain on the proactive role played by the staff.

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CHECKING LAYER BY LAYER.

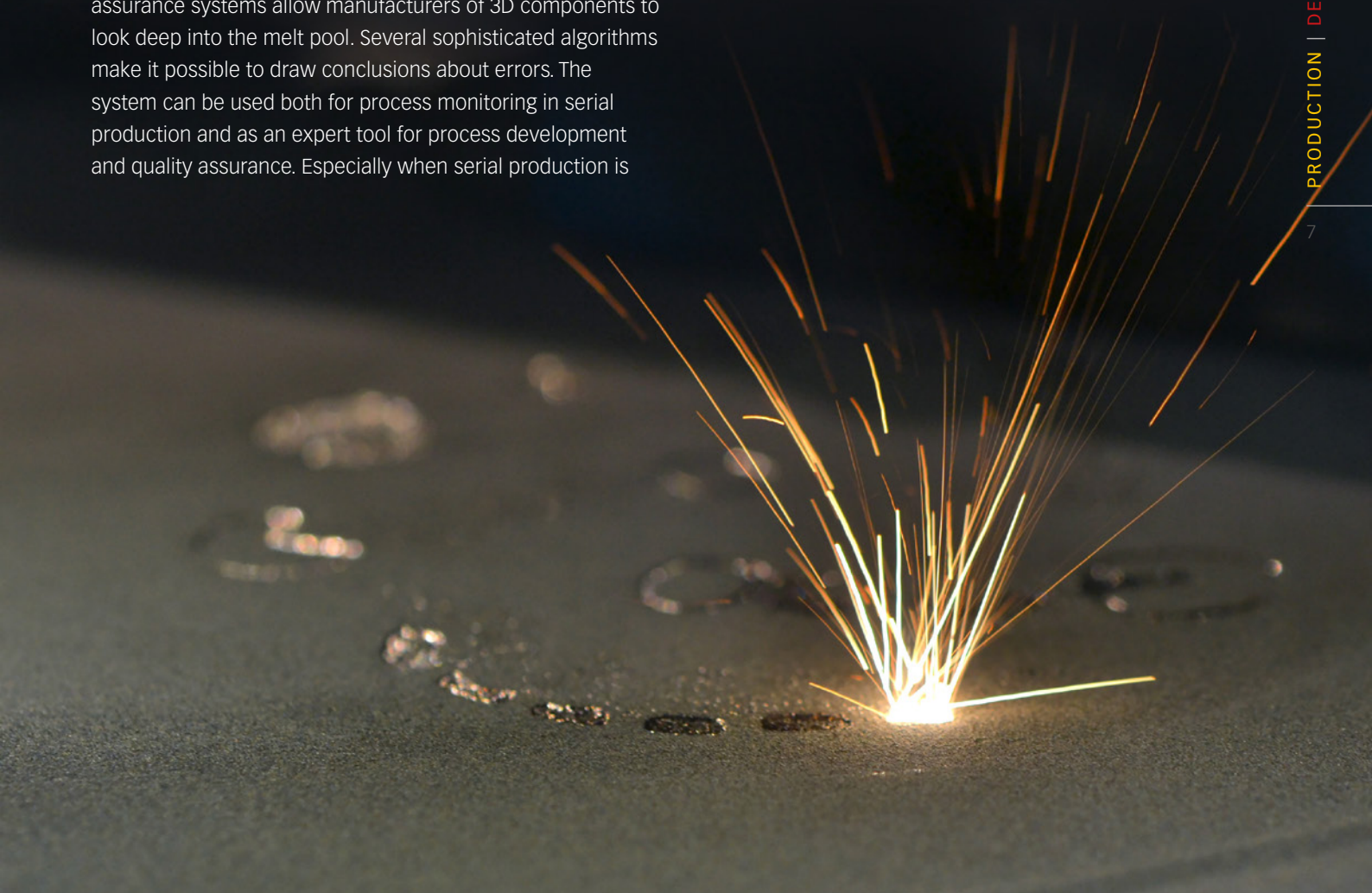
From security-related components to operating theatre equipment, the sheer range of 3D-printed parts is expanding by the day. This also increases the significance of Melt Pool Monitoring in guaranteeing their safe and cost-optimised production.

Whether bespoke, single-batch components through a fully-digital process chain, or complex geometric shapes: 3D metal printing allows for quick and economically efficient implementation of innovative component concepts. Active quality assurance during the printing process is an extremely relevant, indispensable factor on which several sectors such as the aviation industry or medical technology are now particularly keen. Melt Pool Monitoring, which can detect defects already during component printing, has proven particularly effective, explains WILD Project Manager Dieter Trampusch. "Cameras and sensors are used for real-time detection of molten pool emissions in the infra-red range which are generated as radiation during melting. As a result, it is possible to introduce countermeasures or interrupt the process at an early stage". This saves the customer a lot of money, time and material resources.

One of the leading manufacturers in Melt Pool Monitoring is plasmo, a long-standing customer of WILD. "Our quality assurance systems allow manufacturers of 3D components to look deep into the melt pool. Several sophisticated algorithms make it possible to draw conclusions about errors. The system can be used both for process monitoring in serial production and as an expert tool for process development and quality assurance. Especially when serial production is

involved, it is necessary to archive production data for several years", explains Martin Melchart, Head of global operations at plasmo Industrietechnik GmbH. With more than 800 plasmo systems in operation worldwide, the growing list of customers now features top international companies, including some from the automotive and steel sectors.

The industry leader cooperates closely with research institutes and industrial partners like the WILD Group, which has been involved in a series of development and manufacturing projects in the last 17 years. "We bring along many years of experience in the areas of optics and additive manufacturing and we can rely on an assembly team that can quickly and smoothly manage the construction of new systems. In such projects, a short time to market plays a decisive role", says Dieter Trampusch from experience.



50
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1970

TAKING MEASURE OF WILD'S HISTORY.

To mark the occasion of our 50th anniversary, we take a look at some of WILD's very first product highlights.

For decades, it was considered the quintessence of reliability and precision among geodesists: the theodolite by WILD Heerbrugg. The device was used to measure and calculate vertical and horizontal angle differences.

As of the early 70s, the Völkermarkt factory began manufacturing different components for the theodolite on behalf of the Swiss parent company. Production was quite challenging, since, even back then, you had to maintain technical tolerances of a thousandth of a millimetre. "The next step was to develop assembly expertise and to learn how to handle optical elements. The demands on the workers were high and the manufacturing possibilities were limited by the

machinery available at the time. For instance, electronic calibration did not exist. Mechanics and optics were the only ways of achieving maximum measurement accuracy", recalls Richard Hall, who has been working for WILD since 1975.

As of 1981, the main products eventually included tripods with an optical plummet, which WILD assembled for theodolites and automatic levels. This was the starting point for the assembly of entire component groups and products, manufactured in small and medium series. It was also the beginning of WILD's evolution into a systems partner.

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THE WILD GROUP

The WILD Group is comprised of the WILD brands which are established in Völkermarkt, Wernberg and Trnava/Slovakia, as well as Vienna-based Photonic. The Group's 451 highly qualified staff members are always the first choice when precision and reliability are a must and when innovations are called for.