74
2022

A TODAY

THE MAGAZINE FOR ANDRITZ GROUP EMPLOYEES

"ANDRITZ is very well positioned for the future"

FAREWELL INTERVIEW
WITH **WOLFGANG LEITNER**
AFTER 35 YEARS ON
THE EXECUTIVE BOARD

Photo: photoworkers.at

ANDRITZ

Editorial

DEAR READERS,

The upcoming departure of Wolfgang Leitner from the ANDRITZ Executive Board will also be the end of an era for us, the ANDRITZ Today editorial team. His company status report has been an integral part of the ANDRITZ Today employee magazine ever since we began working on it. In every edition, Wolfgang Leitner has answered questions about the economic development and current situation of the company as well as future priorities. This time, he has provided an extensive interview with a look back at past successes and challenges, his expectations for the future, and a few personal remarks.

The question of how the hydrogen topic will develop in the years to come cannot be answered with certainty for the time being. In any event, many countries consider hydrogen a promising energy carrier with the potential to contribute towards the energy transition. We provide an overview of the current ANDRITZ initiatives in this field. The recycling project at ANDRITZ Fabrics and Rolls in Gloggnitz, Austria, is also about sustainability. Just recently, this location started processing residual material from the production of press felts and returning it to the production process. We report on this project's implementation and the experience gathered so far.

The pandemic continues to hold us in suspense. Again and again, we hear from the media and see for ourselves how deliveries are delayed and prices are skyrocketing. We asked Solveig Vitz, Head of Group Supply Chain Management, for her assessment of the situation on the supplier market. In addition, you can read about the growth of the Air Pollution Control division and get to know the new Head of the Pumps division.

We hope you will enjoy reading this edition of ANDRITZ Today!

The Editorial Team

More information is available at:
connect.andritz.com/andritztoday

Contact: andritztoday@andritz.com

ANDRITZ Today also recently became available as an online magazine. Register for the newsletter here: **www.andritz.com/atoday-subscribe** (for employees only)

Contents

ANDRITZ AG
Stattegger Strasse 18, 8045 Graz, Austria,
+43 316 6902-2734, andritztoday@andritz.com
Editors: Michael Buchbauer, Gabriele Weninger
Layout: www.gruenberg4.at, **Printed by:** Thalerhof
gfc.at.74.eng.6300.03.2022

NEXT ISSUE
OCTOBER 2022

"I am convinced that ANDRITZ is very well positioned for the future"

Photos: photoworkers.at

An interview with **Wolfgang Leitner** on the current situation, challenges and successes in his 35 years at ANDRITZ, and why he still won't be spending too much time on islands in the future.

Mr. Leitner, let's start with our questions on the current situation at ANDRITZ. 2021 was yet another business year marked by the pandemic. How was ANDRITZ's performance last year?
2021 was a very successful year for ANDRITZ. Despite the ongoing difficult general conditions due to the Covid pandemic, we achieved the highest order intake in ANDRITZ's 170-year history. All our business areas increased their order intake compared to the previous year and secured important reference orders. And 2021 was a record year for ANDRITZ operationally as well – profitability and net income reached all-time highs.

The lower order intake in 2020 resulted in a slight decline in revenue in 2021. By adjusting our costs in good time, we were able to compensate for this in earnings. In doing so, we took care that our measures would also improve our competitiveness in the medium and long term. That's why there were no cuts in research and development, nor in investments. Thanks to the commitment of our employees, we were able to maintain project progress on our construction sites largely on schedule and without any significant cost overruns, despite the drastic restrictions imposed in some cases due to the pandemic. On behalf of the entire Executive

Board, I would like to take this opportunity to thank all colleagues most sincerely for all their efforts and their understanding for the measures implemented.

What do you expect in terms of general economic development in 2022?
On the whole, I take a positive view of the current year. I think the global economy will continue to grow in 2022. China and the USA are likely to remain the engines of growth, but I expect a good economic environment in Europe as well.

The impact of the situation in Ukraine is difficult to predict at the moment and could, of course, have serious consequences for the world economy. Inflation will certainly remain an important factor. We will have to make sure that we fully consider the cost increases in our project and quotation cost estimates.

You have been a member of the ANDRITZ Executive Board for 35 years and its CEO for 28 years. ANDRITZ has come a long way from a former machine factory to the technology group we are today. In your view, what were the major milestones in ANDRITZ's development? What made the decisive contribution towards successful growth?
Our corporate strategy targets long-term profitable growth. We focus on research and development to generate organic growth, and on the acquisition of companies and technologies that complement and expand our product offering. Our aim is to be a full-line supplier in all four of our business areas and cover all of our customers' production and process steps.

In pursuit of this strategy, we have developed a number of products and technologies over the past few decades that create added value for our customers and help them achieve their corporate goals. On the acquisitions side as well, we have succeeded in purchasing companies that complement and complete our product offering.

Our global set-up was and is another essential factor in the success we have achieved. We are present in all relevant economic regions and sales markets, and >

"Despite the ongoing difficult general conditions due to the Covid pandemic, we achieved the highest order intake in ANDRITZ's 170-year history."

have manufacturing facilities and branch offices there as well. This means we are close to our customers and can make use of local cost advantages.

I also think it's important that we have learned to work together in global teams on an equal footing. Over the years, we have built up centers of excellence worldwide whose know-how is there for all business areas to use. This creates synergies and provides cost advantages.

What would you say were the biggest challenges that ANDRITZ had to overcome?
The biggest challenge in our business is undoubtedly to reduce project risks to a minimum. The financial impact of high project cost overruns can be enormous, and can even leave companies facing extreme financial difficulties.

We've also had projects – fortunately only a small number – with quite dramatic cost overruns in the past decades. That was of course very unpleasant. However, we analyzed in detail each and every one of those projects and the reasons for their deterioration, and initiated measures and steps to avoid such developments in the future and keep contractual risk to a minimum.

When it comes to acquisitions, it is always challenging to find the right balance between integration and independence. A certain degree of integration into the Group is necessary to make use of synergies and cost advantages. On the other hand, the management must also be sufficiently free to make business decisions. Often this is a tricky balancing act, also because situations differ from one company to another.

Where did you set focal points and priorities in your role as CEO? How big a part did you play in operational activities?
I have always believed in the importance of discussing and jointly defining the long-term operating and strategic goals of the respective business units with the company and division managers. In addition, personal contact with key customers was always very important to me.

I did engage selectively in some operational activities, but that was the exception. Although to be honest, I must add that some areas of the business surely had a different impression, at least at times!

You are said to be very analytical, with an emphasis on numbers and data. What principles did you let guide you in your decision making?
Analytical and numbers-focused is certainly right – I would entirely agree. I also have no wish to change the way I am, nor could I. However, my approach was always to trust in the management capabilities and expertise of our managers and give them a high level of individual responsibility. This was based on the understanding that they would come forward if there were difficulties. A good approach, as it turned out.

Are there moments in the past that you particularly enjoy thinking about, things of which you are proud?
Of course, I feel proud when I see the positive development of the ANDRITZ GROUP into a globally oriented market leader over the past few decades. I am also very pleased that many employees have developed both personally and professionally, and very impressively in some cases.

Business-wise, I like to think back on orders we have won. We frequently negotiated until well past midnight, and after receiving the order we celebrated in the deserted hotel lobby, often with drinks from our hotel rooms' mini bars. Conversely, if we lost an order we licked our wounds together and planned how we could do better next time. It's this team spirit that makes ANDRITZ very special.

There were surely also moments and occasions that were not easy for the company or for yourself as CEO. How do you deal personally with such situations?
Yes, of course, that's part of doing business. In such cases, I always tried to act rationally, take a solution-oriented approach and leave emotions out of things as much as possible.

If we take a look into the future, how can an industrial company like ANDRITZ successfully position itself and continue to thrive in these times of rapid change, given such topics as automation and digitalization, climate change

and climate protection, and innovation and the New Way of Working? Where is ANDRITZ headed?
I am convinced that ANDRITZ is very well positioned for the future. We serve customer industries with long-term structural growth. We hold a good market position in all of our business areas and have motivated and highly qualified employees worldwide. We have demonstrated in every crisis, whether it was the Asia crisis, the burst of the dotcom bubble, the global financial crisis, or right now the Covid pandemic, that we are well positioned and have sufficient financial stability to overcome challenges of this kind. We have often emerged from such crises stronger than before, even if it sometimes required painful cut-backs, which we implemented to the extent required without hesitation.

When you were named Man of the Year by an Austrian business magazine in 2007, you said that despite all your success you had no inclination yet "to sit around on an island." That was 15 years ago. Do you feel a need for more peace and quiet now? What plans and projects will you pursue in this new phase of your life?
I am very much looking forward to my work on the ANDRITZ Supervisory Board, and have a number of hobbies, most of which have a business background – or so my wife says. So there will only be occasional visits to the "island," but I will certainly go there.

Thank you for this interview.

"I am very much looking forward to my work on the ANDRITZ Supervisory Board."

BIOGRAPHY

After completing a PhD in chemistry at the University of Graz, **Wolfgang Leitner** worked on the development of synthetic resins at Vianova AG in Graz, a subsidiary of Hoechst AG of Germany. In 1981, he opted for a change of direction and decided to take a job as a consultant with McKinsey & Company. This consulting job brought him to ANDRITZ AG – the company where his father had worked as a machine fitter for over 30 years – in 1983 when the company was suffering from financial difficulties.

In 1985, he went into business for himself and set up Genericon Pharma GmbH together with a partner in order to market and sell generic prescription drugs. The Eastern European subsidiaries that emerged from this company were listed on the Budapest stock exchange and later taken over by a US pharmaceutical company. This provided the funds that enabled Leitner to take over ANDRITZ from AGIV together with some partners in 1999.

In 1987 – ANDRITZ was profitable again and had just been taken over by the German holding company AGIV – Leitner accepted the position of CFO. The plan was that he would stay for a period of two years, but this turned out to be 35 years. In 1994, he became CEO of ANDRITZ AG.

In 2001, ANDRITZ went public. Today Leitner holds around 31.5 percent of the company's shares through his foundation.

Wolfgang Leitner will end his function as CEO in April 2022 and take a seat on the ANDRITZ AG Supervisory Board.

ANDRITZ ENTERS THE HYDROGEN SECTOR

Photo: ©Corona Borealis – stock.adobe.com

Many countries see hydrogen as an energy carrier of the future: one that can contribute to the energy transition away from fossil fuels and, thus, the urgently needed reduction of greenhouse gas emissions. ANDRITZ recently launched initiatives and cooperation projects in the hydrogen sector.

According to the International Energy Agency (IEA), 17 governments have adopted national hydrogen strategies, and over 20 more have announced such strategies. The European Union, and in particular Germany, believe hydrogen can play an important role in achieving the goal of climate neutrality by 2050.

GREEN, GRAY AND BLUE

Hydrogen (H_2) is a gas, and it is abundant on Earth, but almost always in the form of a compound – mainly as water. Extracting the hydrogen requires energy. If that energy is generated from renewable sources, like wind, solar or hydropower, the result is "green" hydrogen. If fossil fuels such as natural gas are used, CO_2 arises in the production process. Hydrogen produced with fossil fuels is categorized as "gray" if this CO_2 is released into the atmosphere (the most common method to date), and as "blue" if it is separated and stored.

"At the moment, the green portion of hydrogen production is still very small," says Helmut Wöginger, Group Business Development. "The main reason is the higher production costs compared to gray hydrogen, although the difference is currently smaller due to the significant rise in gas prices. The current figure is between 4 and 6 euros per kilogram for green hydrogen and just under 2 euros per kilogram for gray hydrogen, based on the long-term European average energy cost of 40 euros per MWh and without considering the cost of CO_2 certificates. It is expected that further development of hydrogen production technologies and the likely decrease in renewable energy costs will bring green hydrogen costs down to around 2 to 3 euros per kilogram by 2030."

The Hydrogen Council, a global initiative by leading companies, expects production of green hydrogen to increase from 0.7 million tons a year in 2020 to 300 million tons in 2050. The EU is promoting further development of innovative hydrogen technologies as part of the Green Deal.

FLEXIBLE USE

Hydrogen can be used in many different ways. We can make synthetic fuels (e-fuels) out of it, generate electricity in fuel cells, and use it as fuel or process gas in industry. In terms of the energy transition, it is considered a seasonal energy storage medium for renewables. Surplus electricity from solar and wind power can be stored in the form of hydrogen for long periods and then serve as gaseous or liquid energy carrier without CO_2 being released when it is converted back into energy. To drive forward the production of

>

green hydrogen, it is also possible to build new plants for hydrogen production in remote areas that do not need electricity, but are rich in renewable resources such as hydropower.

COOPERATION FOR GREEN HYDROGEN PRODUCTION

In mid-2021, ANDRITZ Hydro and German company MAN Energy Solutions signed a strategic framework agreement to jointly develop international projects for the production of green hydrogen based on hydropower.

An initial pilot project is currently underway in Europe, and other potential projects are to be identified in the future and implemented as part of the German government's global hydrogen initiative. Its basis is the H2Global funding mechanism aimed at promoting the market ramp-up of green hydrogen. For this purpose, hydrogen energy partnerships are to be set up in countries with high potential to provide a long-term, cost-effective and reliable supply of green hydrogen to Germany and the EU.

"The advantage of hydropower as a source of energy to produce hydrogen is its high availability and hence the high utilization rate it can provide for the electrolysis plants. The resulting cost advantage is currently generating considerable worldwide interest in hydropower as a reliable energy source to produce hydrogen on a large scale. For developing and emerging countries in particular, this opens up new export opportunities for storable, green energy," says Peter Stettner, Market Management, ANDRITZ Hydro.

More information and an expert interview on the topic of hydrogen are available in the ANDRITZ Hydro customer magazine (Hydro News, issue 35).

ENTERING ELECTROLYZER PRODUCTION

An electrolyzer is needed to produce green hydrogen. Using an electrochemical process, it makes green hydrogen and oxygen from green electricity and water. Metals Processing has set itself the goal of becoming a global supplier of electrolyzers.

"With our expertise in electrochemical processes, for example electrolytic galvanizing, and our experience in project business and plant manufacturing, we want to enter the electrolyzer market and build up a new line of business for ANDRITZ. We are developing this business opportunity through an internal startup," says Peter Eisenköck, Head of the Green Hydrogen startup. "As far as the technology is concerned, we will

"With our expertise in electrochemical processes and our experience in project business and plant manufacturing, we want to enter the electrolyzer market and build up a new line of business for ANDRITZ."

Peter Eisenköck, Director, Green Hydrogen, ANDRITZ Metals Processing

start by making use of what is already available on the market. There is the proven alkaline electrolysis, AEL, which is becoming increasingly efficient, and the more recent proton exchange membrane process, PEM, which is currently being optimized using extensive funding. In addition, we will also take part in further development of new technology, such as anion exchange membrane and high-temperature electrolysis."

The electrolyzer market is currently small and is divided among numerous suppliers. Metals Processing expects a sharp increase in demand from around 2025 onwards, and believes now is a favorable moment to enter the market. The prospects look good, especially in view of the efforts by energy-intensive industries, first and foremost the steel industry, to operate their plants without fossil fuels.

At the beginning of the year, the Green Hydrogen startup team started work with an international staff of seven at the Vienna location. The first order is expected in the course of this year.

FUEL CELL MANUFACTURING

While the electrolyzer produces hydrogen from electricity and water, the fuel cell turns hydrogen back into electricity and water. The ANDRITZ subsidiaries Schuler and ANDRITZ Soutec have entered this segment. In collaboration with thyssenkrupp Automation Engineering, they recently began offering complete plants for the production of fuel cells. The cooperation agreement was signed last September.

Schuler supplies the presses, automation equipment and dies to manufacture the bipolar plates of a fuel cell. ANDRITZ Soutec delivers laser welding systems for gas-tight welding of the bipolar plates, and thyssenkrupp provides the technology for applying seals and for component handling. One plant should be able to produce up to 50,000 fuel cells per year.

Fuel cells can be used in vehicles such as cars, trucks, buses, trains and construction machinery, and in the future also in aircraft with a hydrogen drive. Other areas are stationary applications like energy supply systems for individual buildings or emergency power supply units.

"With this new cooperation, our customers have the opportunity for the first time to order complete plants for the production of fuel cells from a single source. The partners in this cooperation complement one another ideally. Due to our international focus, we are very well positioned for this future-oriented technology," says Hermann Uchtmann, Technology Management, Industry Division, at Schuler.

More information on this cooperation is available in the Schuler employee magazine PowerPress, issue 05, December 2021. It also explains what a fuel cell is made of and how it works.

"With this new cooperation, our customers have the opportunity for the first time to order complete plants for the production of fuel cells from a single source."

Hermann Uchtmann,
Technology Management,
Industry Division, Schuler

"The advantage of hydropower as a source of energy to produce hydrogen is its high availability and hence the high utilization rate it can provide for the electrolysis plants."

Peter Stettner,
Market Management,
ANDRITZ Hydro

BETTER RESULTS WITH IMPROVE ANDRITZ

Improvement projects that are professionally implemented can achieve sustainable, measurable results. Improve ANDRITZ provides support in the form of training, methods and tools. To date, 230 such projects have been successfully implemented. They have resulted in optimization of a wide range of processes and improvements in the case of deviations.

Improve ANDRITZ is an initiative of Group Quality and Safety Management (GQS) that supports employees throughout the Group in systematically and sustainably improving products, processes and services. A culture of continuous improvement contributes to the company's success and strengthens its competitive position.

FLEXIBLE PARTICIPATION THROUGH E-LEARNING

Improve ANDRITZ offers a comprehensive training program to teach helpful methods and tools. Prior to Covid, all training took place face to face. The Improve ANDRITZ team saw the Covid-related restrictions as an opportunity to reach even more colleagues through eLearning. They quickly divided the theoretical content of the classroom training courses into several eLearning modules and made them available via the central ANDRITZ training platform.

Thanks to the training program's modular structure, it is no longer necessary to define a common start date for all participants.

Scheduling conflicts are no longer a reason for not tackling important improvements. Furthermore, eLearning saves travel costs.

Regular personal calls throughout the entire duration of an improvement project ensure that the tools are adequately applied and the projects implemented in a timely and sustainable manner. The main focus in project work is on clearly describing the problems and analyzing their causes using figures, data and facts before deriving proposed solutions.

>

IMPROVE ANDRITZ TRAINING OVERVIEW

Yellow Belt Training

- Basics of the DMAIC cycle (Define, Measure, Analyze, Improve, Control)
- Especially suitable for project sponsors, project team members and process owners
- 4 hours of eLearning, approx. 3 months' project duration

152 ANDRITZ Yellow Belts trained

Green Belt Training

- DMAIC cycle
- Application of various analysis tools
- Implementation of an improvement project with a clear financial benefit
- Regular coaching calls
- 7 hours of eLearning, approx. 5 months' project duration

63 ANDRITZ Green Belts trained

Black Belt Training

- Advanced application of analysis tools
- Implementation of a complex improvement project with high financial benefits
- Regular coaching calls
- Soft skills for successful project management (3 days of classroom or online training)
- Completion with external certificate

16 ANDRITZ Black Belts trained

Since the launch of the Improve ANDRITZ initiative in 2019, 230 improvement projects have been successfully completed. The projects covered topics such as the sales process including costing, the engineering process including interface issues, the spare parts process, the proper resolution of customer complaints, and others. In addition to these process optimizations, the focus was also on the sustainable improvement of major deviations. The increasingly important aspect of sustainability in the product development process was also the subject of a Green Belt project.

NEW TRAINING ON ROOT CAUSE ANALYSIS

Since the switch to eLearning in pandemic year 2020, 45 Green Belt level projects have been launched and completed. The Yellow Belt training, the first qualification level, has since been completed by 114 participants. More than 250 colleagues attended the new training course on root cause analysis, which provides support in dealing with deviations.

For questions about Improve ANDRITZ or if you would like to carry out an improvement project, please contact: johannes.reiser@andritz.com or improve.andritz@andritz.com

Examples of successful improvement projects

ANDRITZ SEPARATION, SOUTH AFRICA: **76 PERCENT REDUCTION IN DESIGN HOURS**

HENNO TRAUT, ENGINEERING MANAGER, ON HIS GREEN BELT IMPROVEMENT PROJECT:

"We saw that the engineering efforts required for each piece of equipment sold were too high. Our target was to reduce engineering hours and improve the projects' critical paths.

In our improvement project, we investigated the required hours and total lead time for different types of thickeners. We drew up the overall process flow and performed root cause analyses for all process steps involved. Based on these findings, we did some brainstorming to search for improvement possibilities. As a result, we created a new process, set up the standard routine in a systematic way following the 5S principle, and standardized drawings and material master data.

Our first pilot project showed an 84 percent reduction in design hours and a 68 percent reduction in lead time. Since then, the improvement has stabilized at a 76 percent reduction in design hours and a 47 percent reduction in lead time. This removed the engineering work from our projects' critical paths."

ANDRITZ HYDRO, INDIA: **RESPONSE TIME FOR SPARE PARTS SHORTENED BY 55 PERCENT**

BRIJENDRA JOSHI, HEAD OF DEPARTMENT, SERVICE & REHAB, ON HIS GREEN BELT IMPROVEMENT PROJECT:

"We were not satisfied with our response time for spares and services. Our target is to increase our market share, which requires a faster response time to customer requests for quotations.

As part of our improvement project, we measured the time from RFQ to offer and found that lead times differed by spare part category. We investigated the process flow in detail and identified the main influencing factors. Next, we defined and implemented improvement actions over the whole process chain. In order to improve prioritization, a common and dedicated structure was made for spares. In addition, the drawing archive status was reviewed and bills of materials were checked. We are about to check the material codes in SAP and improve communication with vendors.

The measures implemented so far have helped reduce lead time for spare parts by 55 percent."

PULP SERVICE, FINLAND: **STOCK LEVELS LOWERED BY 25 PERCENT IN VALUE**

TEEMU SUURONEN, QHSE MANAGER ON HIS BLACK BELT IMPROVEMENT PROJECT:

"The target of my improvement project was to reduce the Pulp Service spare parts stock level in Finland by 10 percent. This also supported the ANDRITZ GROUP's target to improve liquidity and reduce net working capital.

Our investigation into responsibilities and procedures showed that there was no model or general guideline on how much stock to keep of each item. Detailed data analysis over a period of 18 months revealed that 15 percent of the stock items accounted for 80 percent of the stock value and 37 percent of the items had a turnover rate of 0. We conducted a root cause analysis to understand why large amounts of high-value, low-turnover items were kept in stock and found that the main reason was a lack of inventory data transparency combined with the lack of harmonized procedures. The analysis also revealed significant potential for stock reduction.

We created a model for setting stock levels based on confidence level and item criticality. After our first tests with the model had shown very good results, we further refined it to take lead times and strategic decisions into account. We then reviewed the existing stock based on our new model. By the end of 2020, reduction in Pulp Service stock levels in Finland had resulted in a 25 percent lower stock value while the stock turnover rate had increased. Optimization of stock levels will continue in 2022. We see further potential for improvement on a global level."

AIR POLLUTION

KAP DIVISION GROWS AND ROUNDS OFF PRODUCT PORTFOLIO

CONTROL

"Our strategy was to add dedusting systems to our product portfolio and to enlarge the proportion of our service business. We achieved both goals in a big way with the acquisition of parts of GE Steam Power's air quality control system business."

Harald Reissner, Division Manager, Air Pollution Control (KAP)

In July of last year, the Air Pollution Control (KAP) division acquired important parts of GE Steam Power's air quality control system business. KAP's product portfolio is now complete: the division can offer flue gas treatment systems for all industrial needs.

KAP has thus significantly strengthened its market position and become a strong internal partner for several ANDRITZ business areas.

CHANGING MARKET

The market for flue gas treatment systems is undergoing major transformation. This is due to the phasing out of coal-based energy generation and the resulting shutdown of coal-fired power stations, which used to be the main customers of these systems. As a result, KAP has been focusing on the industrial sector for some time now.

"Our strategy was to add dedusting systems to our product portfolio, as these systems play an important role in industrial applications, and to enlarge the proportion of our service business. We achieved both goals in a big way with this acquisition," says KAP Division Manager Harald Reissner.

>

KAP management team:
Alain Bill (Global Sales and Business Development), Ronnie Uhr (Dedusting Systems), Harald Reissner (Division Manager), Ole Boegh (Service), Klaus Bärnthaler (SeaSOx)

"We already have CO_2 capture processes in our program and are now adapting them for various industrial applications. CCUS – carbon capture, use and storage – is a main focus of our R&D program."

LEADING ROLE

"In a big way" is right. This acquisition has made KAP one of the three leading suppliers of flue gas treatment systems on the global market. The division expects a significant increase in revenue in the years to come. Some 4,000 reference plants have resulted from the acquisition, 2,000 of them in the dedusting segment. With this huge installed base, the proportion of service business is expected to rise to 40 percent of revenue.

OTHER ATTRACTIVE PRODUCTS IN THE PACKAGE

The acquisition has brought some attractive additional products as an extra bonus. These include pulse-controlled high-voltage units, so-called switched integrated rectifiers (SIR) that play a central role in efficient operation of electrostatic precipitators, and heat recovery systems with which even low-temperature waste heat can be recovered and reused, for example in district heating. "Customers in industrial flue gas treatment applications will benefit from these new solutions to achieve ultra-low emissions and optimize plant operations at the same time," says Reissner.

COLLABORATION WITHIN THE GROUP

"With our expanded product portfolio and numerous references, we have now truly arrived in the pulp and paper, iron and steel, and mining and minerals industries," Reissner adds. "We look forward to working successfully together with the Pulp & Paper, Metals, and Separation business areas."

CARBON CAPTURE AS R&D FOCUS

Reissner sees opportunities for further growth in the future as a result of the industry's intensive efforts to become CO_2 neutral. "In some industries, for example cement or iron and steel, CO_2 inevitably arises from production. The industries want to capture this CO_2 and reuse it in different ways," explains Reissner. "In the iron and steel sector, we are at the leading edge technologically with our flue

4,000 reference plants have been added to KAP's portfolio as a result of the acquisition. The dedusting systems at Bracell's new pulp mill in Brazil are part of them.

KAP is now the market and technological leader in **semi-dry flue gas treatment**. The photo shows the plant at BMC Moerdijk in the Netherlands.

Switched integrated rectifiers (SIR) play a central role in efficient operation of electrostatic precipitators. View of the SIR manufacturing facility in Växjö.

"With our expanded product portfolio and numerous references, we have now truly arrived in the pulp and paper, iron and steel, and mining and minerals industries."

Photo: photoworkers.at

gas treatment systems, both in conventional production and when it comes to new production methods – for example direct reduction based on hydrogen. We already have CO_2 capture processes in our program and are now adapting them for various industrial applications. Just recently, we sold a demonstration plant to the cement industry for CO_2 capture based on amine scrubbing. CCUS – carbon capture, use and storage – is a main focus of our R&D program," adds Reissner.

TECHNOLOGY CENTER AND GLOBAL LOCATIONS

Development work is an important topic in the newly acquired business. The main location for dedusting systems in Växjö, Sweden – not far from the existing ANDRITZ office there – has a well-equipped technology center with test plants and a laboratory as well as an SIR manufacturing facility. The Växjö location also has a warehouse that can promptly supply spare parts to customers. Reissner emphasizes the importance of this aspect, as emission regulations require industrial plants to shut down their entire production if the flue gas treatment system breaks down.

In addition to Växjö, there are new locations in Brazil (São Paulo), Japan (Kobe), Poland (Krakow), China (Beijing) and the USA (Muncy), where an SIR repair center is being established.

NEW SET-UP

Integration of the new business is forging ahead. KAP has changed its organizational structure and is now operating with four global product groups: dedusting systems (with Växjö as Product Home, headed by Ronnie Uhr), flue gas treatment systems (with Raaba as Product Home, headed by Harald Reissner), Service (Växjö Product Home, headed by Ole Boegh) and SeaSOx exhaust gas treatment systems for maritime vessels (Raaba Product Home, headed by Klaus Bärnthaler).

"My focus has always been profitable growth"

An interview with **Otto Max Schaefer**, Head of the Pumps division since October 1, 2021

Photos: photoworkers.at

Mr. Schaefer, what milestones in your career have most influenced you?
I think the most interesting aspect of my career is the move from management consultancy to management responsibility. One of the milestones for me was my first job in strategy consulting with the Boston Consulting Group after graduating from university. This meant analyzing a problem, developing a logical solution, presenting it in a convincing way, and supporting its implementation without, however, bearing the ultimate responsibility. Later, as an independent management consultant, I was able to replace some of the analyses with my own experience and focus primarily on the advisory part.

Implementing solutions and taking responsibility for them – that was my role as Managing Director with the NETZSCH Group, which I accompanied on its journey from a restructuring case after a company sale went wrong to becoming a role model company. By the way, I also had dealings with ANDRITZ at that time as one of my first tasks was selling the filtration division to ANDRITZ.

The third important milestone was my post on the executive board of a technical retail company. While technical excellence and product quality were the main criteria in mechanical and plant engineering at NETZSCH, technical retailing was focused on lean and fast processes, the right stock-keeping, and sophisticated logistics. This technical retailer was private equity-owned. To us, this meant we had to achieve a defined goal and sell the company within three years, which we did.

In these three very different sectors, I was able to gather a wide range of experiences that complement each other and help me do my work today.

What topics did you focus on in the companies you worked for?
My focus has always been profitable growth. Regardless of how growth is achieved – regionally, through new products, by conquering new customer industries, organically or through acquisitions – the important thing is to align the company's organization to this growth and design its processes accordingly. The companies that I headed wanted to grow. My job was to make this growth possible.

This will be my goal at ANDRITZ as well. The Pumps division is profitable but has relatively weak growth. That is where we will get to work.

How would you describe the pumps business? What are the main features?
A characteristic feature is certainly the range of the pumps business. Our pumps are used worldwide and in very different applications – from drinking water treatment plants to various industrial processes, above all in the pulp and paper industry, to power stations. The product portfolio is also a very broad one – we have many different sizes and types of pumps in our program. Our projects begin at some thousand euros and range up to double-digit million sums. To be able to further develop a portfolio of this kind is also part of my fascination with my new tasks.

"The Pumps division is profitable but has relatively weak growth. That is where we will get to work."

How would you rate the product portfolio and set-up of the Pumps division? Where do we stand in relation to our competitors? Where do you see strengths and what do we perhaps have to improve?
Our strength lies in technical excellence. We have very good products. Our competitiveness increases along with the technical demands. When customers have high requirements and are willing to pay for quality products, our chances are good.

What we should work on above all are delivery times and customer proximity. Unfortunately, we lost >

some sales staff in the past few years and need to build up this team again to cover the market and be closer to customers. In addition, I see room for improvement in collaboration within the Group. Our division has not yet positioned itself optimally as a partner for internal customers – the other divisions and business areas. We will work on this, too.

You took over management of the Pumps division at the beginning of October last year. Which topics are you concentrating on in this initial phase?
First of all, our processes and organizational structures. We must support our processes with suitable electronic tools so that we are faster in preparing quotes and executing orders. On the organizational side, we will focus above all on improving interaction between global and local positions. We need a well-functioning organization so that our energy is not consumed by internal topics, but rather goes out to the customer.

Another priority task, as already mentioned, is rebuilding our sales team. We must close the gaps in sales so that we can serve the market systematically, generate more inquiries and, in a further step, extend our business in focus regions.

How would you describe your management style? What is important to you in collaboration with staff and colleagues?
I believe I am team-oriented. It's important to me that my team members enjoy their work, that we work together to achieve our goals, and take pleasure in what we achieve. I consider an important task to make sure the right people with the right motivation are in the right place and can work together well. When it comes to making decisions, I try to reach a consensus wherever possible but am also willing to make unpopular decisions alone if necessary.

ANDRITZ recently defined some central modes of behavior as the basis of group-wide collaboration – #1ANDRITZway. Does it contain a principle that you personally find particularly important?
It is very difficult for me to pick out one of the principles because that would automatically imply that I consider the other three less important. In my view, the four principles of behavior mutually support one another, and I am happy that ANDRITZ has this initiative.

The #1ANDRITZway principles of behavior coincide very well with my own values and my approach to tasks and challenges.

Where do you live and what do you like to do in your leisure time?
I live with my family – my wife and two sons – in Selb, a small town in the German region of Upper Franconia. I spend my working weeks partly in Graz and partly in Schwäbisch Gmünd at ANDRITZ Pumps Germany. I like to spend my spare time outdoors, hiking or skiing. I'm also an enthusiastic hobby pilot.

Thank you for this interview.

CAREER

- Degree in electrical engineering from the Technical University of Munich and Master of Business Administration (MBA) from Columbia University, New York
- PhD in Economics from Helmut Schmidt University in Hamburg
- Strategy consultant at the Boston Consulting Group
- Managing Director of NETZSCH Group
- CEO of Zitec Group, Plattling, Germany, and member of the executive board of IPH, Paris
- Board level management consultant
- Head of the ANDRITZ Pumps division since October 1, 2021

THE SUPPLY CHAIN IN TIMES OF PANDEMIC

Photo: Michaela Begsteiger

"Collaboration and open communication are extremely important in times of crisis, because you can't cope with a situation like this all by yourself."

AN INTERVIEW WITH **SOLVEIG VITZ**, HEAD OF GROUP SUPPLY CHAIN MANAGEMENT (GSC), ON THE IMPACTS OF THE PANDEMIC, MEASURES TAKEN BY ANDRITZ, AND WHAT WE CAN LEARN FROM THE CRISIS.

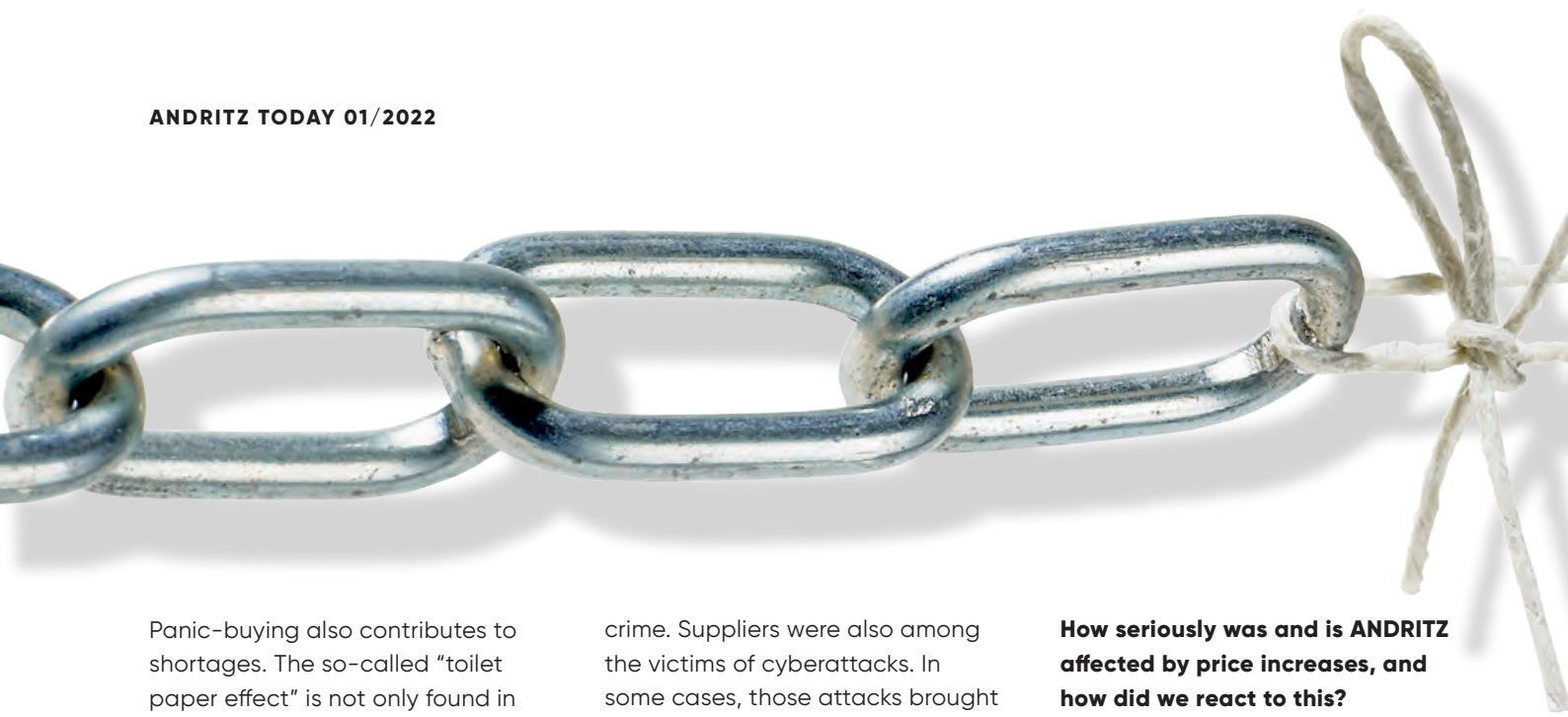
We are hearing in the media, and some of us know from personal experience, that the pandemic is delaying supplies and pushing up prices. How would you describe the situation in the supplier market?

In this crisis, some aspects have emerged that otherwise receive little notice. First, there is the importance of jobs right at the beginning of the supply chain. When the pandemic broke out, mines had to suspend operations, and when they wanted to start up again, they no longer had the workforce to do so. In many cases, it is not the domestic population that does strenuous and poorly paid work like mining jobs, but labor from other countries. However, this labor was no longer available because of the travel restrictions. The crisis has shown us very clearly how dependent we are on international workforce mobility.

The labor shortage was particularly noticeable in the transport sector – whether in ports, trucking or delivery services. The situation was further exacerbated by the very low vaccination coverage in some trades and regions.

In combination with rigorous lockdowns, the labor shortage in the transport and production sectors has led to a huge backlog of deliveries. Before the pandemic, ships perhaps had to wait a few days before their freight was unloaded, but now it is often several weeks. It will take time for this backlog to clear. The media have reported extensively on the shortage of electronic chips. We are also hearing about suppliers having to work short hours because they don't have the basic materials they need, such as sheet metal, electronic switches or simple machining tools.

>



Panic-buying also contributes to shortages. The so-called "toilet paper effect" is not only found in the consumer goods market, but also in the B2B sector – fortunately only in a very small number of companies. Such panic-buying has a negative effect not only on other buyers, but also on suppliers who find it difficult to cope with the fluctuations in demand.

The massive shift of activities to digital channels was another challenge for suppliers. Small and medium-sized enterprises, in particular, were not prepared for this and first of all had to adapt to the new situation to be able to operate. Luckily, we at ANDRITZ had already worked with modern, digital tools before the pandemic and were thus able to act more flexibly. Unfortunately, rapid digitalization also causes a rise in cybercrime. Suppliers were also among the victims of cyberattacks. In some cases, those attacks brought their operations to a standstill.

Generally speaking, the challenges of global supply chain dependency became evident for many goods during this pandemic.

Furthermore, extreme optimization in some sectors, like logistics and stock-keeping, has had a negative impact. Calculations and deadlines are extremely tight to optimize net working capital and earnings, and deliver "just in time." There are simply no reserves available.

All of these factors have caused raw material prices, and thus the prices of finished goods, to rise significantly since the beginning of 2021.

"In my overall view, the main thing is to maintain and further strengthen this culture of collaboration, communication and openness to new solutions that we began to create before the crisis."

How seriously was and is ANDRITZ affected by price increases, and how did we react to this?
Price increases have of course hit us hard in some projects. We tried to counteract the effects through various measures together with our customers and suppliers. Still, there were some price increases and delays in delivery that we could not cushion. And these enormous challenges will probably continue worldwide in 2022.

When we sign new framework contracts, we normally try to make some savings. In the current situation, this was not possible. What we could do was minimize the enormous increases.

When there were bottlenecks in deliveries, we naturally pulled out all the stops to find prompt solutions. Finding completely new suppliers is practically impossible in such a situation, because the suppliers will of course serve their regular customers first. However, we were able to expand our collaboration with existing suppliers by using their services across more ANDRITZ divisions.

Furthermore, we exchanged goods within the Group and prioritized projects to supply the most urgent ones faster. We also came to agreements with customers to

redirect parts that had already been delivered but were not yet needed.

All these measures were only possible through the great commitment by many colleagues, and I would like to take this opportunity to thank all those who faced up to the constant changes every day and coped with them.

In addition to these firefighting measures, we had already initiated some changes before the crisis at the beginning of 2020, such as early involvement of the Supply Chain Management team in the sales process for focus projects.

That has already paid off in the current situation. The changes essentially add up to a holistic approach to the supply chain. We have combined Procurement and Logistics to become Supply Chain Management, intensified the open exchange with interface functions like Legal and Quality – especially for quality monitoring – and strengthened collaboration with the Sales, Service and Project Execution teams in the divisions.

Why is collaboration so important in this context?
Collaboration and open communication are extremely important in times of crisis, because you can't cope with a situation like this all by yourself. Everyone has other ways of contributing towards solutions.

"We tried to counteract the effects through various measures together with our customers and suppliers."

Sales and Project Execution are in direct contact with the customer and can address the topic of expanding the list of suppliers. The Engineering departments can think about where it would be possible to use alternative manufacturing solutions, standard and non-variable parts. Right now, it is extremely important to place clearly defined orders together with the Engineering departments and Project Management at the earliest possible stage in order to counteract the sometimes enormous lengthening of delivery times. Supply chain risks and price developments must be taken into consideration in Sales.

We send the divisions monthly market reports with current and expected material price developments. During the crisis, we also added current empirical data from the markets and some recommendations to these reports.

What should we learn from this crisis in terms of the supply chain?
Early involvement, risk simulation and standardization are the key words, and not just in this crisis. When a crisis has passed – and even this crisis will pass – the tendency is to breathe a sigh of relief and then carry on as before. We shouldn't do that. We should continue to reduce our dependence on individual markets, involve Procurement early on in the sales phase, use more standard and non-variable parts, maintain a minimum stock level, and consistently manage supply chain risks in an open exchange with all interface partners.

In my overall view, the main thing is to maintain and further strengthen this culture of collaboration, communication and openness to new solutions that we began to create before the crisis. This will help us deal even better with future crises and be more successful in good times.

Thank you for this interview.

Press felts utilizing recycled material

Environmental technology project by ANDRITZ Fabrics and Rolls closes loops and reduces CO_2 emissions

R&D Director Klaus Haiden and Plant Manager Helmut Müller inspecting a press felt at the Gloggnitz plant

Considerable amounts of valuable synthetic material accumulate as waste in the production of press felts for paper machines. The ANDRITZ location in Gloggnitz is now reusing part of it in production.

Press felts are important consumables in papermaking. The felts, up to 115 meters long and up to 10 meters wide, transport the paper web through the press section and carry off the water pressed out. Paper mills need large numbers of press felts as they must be replaced regularly, usually after only a few weeks in operation.

These felts, made of high-grade synthetic material, are the main product at the Gloggnitz location of the Fabrics and Rolls division. Around 1,200 tons of press felts are produced annually in Gloggnitz. Some 190 tons of recyclable synthetic waste result from the manufacture of semi-finished goods (yarns, fabrics) and from cutting the felts to their final size. To further close the loops and conserve resources, Klaus Haiden's R&D team in Gloggnitz launched a project to return this residual material to the production process.

STATE AWARD FOR ENVIRONMENTAL TECHNOLOGY

Together with universities and companies from various sectors, Gloggnitz joined a government-funded research project called Tex2Mat in 2018. The aim was to develop new processes to recycle textile waste containing different materials. One area of the project dealt with processing mixed polyester and cotton fabrics from waste textiles for reuse in new products. The second focused on the recycling of polyamide blends, which has now been implemented in Gloggnitz. The Tex2Mat project received the Austrian State Award for environmental and energy technology in 2021.

FROM RESIDUAL TO VALUABLE MATERIAL

"Press felts contain up to three different types of polyamide. There aren't any processes available yet to separate these polyamides materially. That's why we have been working together with university departments to investigate whether we can further process the polyamides as a blend," explains Haiden. "We carried out several polymer engineering analyses and were able to prove that it is in fact possible." After answering this basic question, the next step was to have the polyamide waste granulated by a recycling company. The recycled granulate was then processed into monofilaments. These monofilaments, which are similar to fishing lines, are one of the raw materials for press felt production.

The recycled filaments underwent the same strict quality controls that are applied to new materials in Gloggnitz. "The material analyses have shown that the recycled material corresponds exactly to our specification for new material," says Haiden. "We then produced press felt samples from a blend of new and recycled materials and tested them extensively. These tests were successful, too."

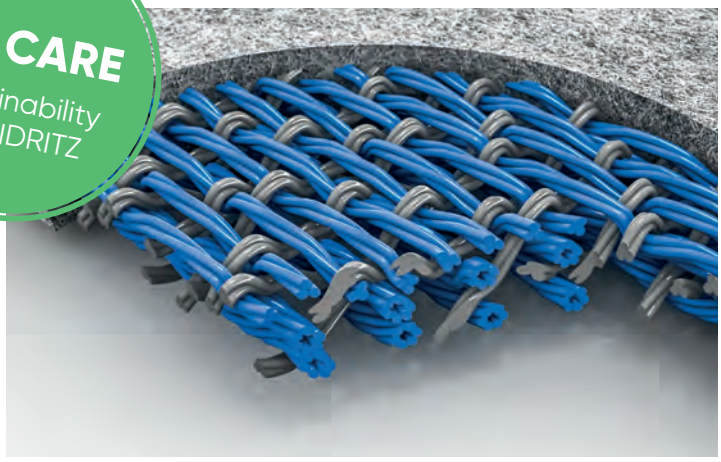
Press felts on a paper machine

REDUCING CO_2 EMISSIONS

The Gloggnitz location has been producing press felts containing a certain percentage of recycled material for several months now. "With our recycling project, we are further closing the loops at our location and contributing towards cutting the CO_2 emissions generated in the production of new plastics," Haiden explains. "The

WE CARE
Sustainability at ANDRITZ

Press felt with recycled material (blue)



Residual materials from press felt production

customers we have told about our project were very interested right from the start. Sustainability is a major concern in the paper industry."

PRODUCTION UNDERWAY

Gloggnitz has already delivered more than 50 felts containing a portion of recycled material to customers. In a next step, the location is planning tests with a higher proportion of recycled material. This could be up to 40 percent in some parts of the press felt. "The timing is ideal. With rising oil prices, recycling of plastics is also becoming increasingly attractive from a price perspective," says Haiden.

RECYCLING OF FORMING FABRICS

ANDRITZ Fabrics and Rolls is striving to find even more ways to recycle synthetic waste. Another of the division's development projects deals with the recycling of forming fabrics. These fabrics made of polyamide and polyester are used to dewater the paper as it enters the paper machine and convey it through the forming section. The challenge in this project is to separate the polyamide and polyester monofilaments in such a way that recycling of each fraction is possible. Recycled material from production waste could also be used in the manufacture of forming fabrics in the future.

"The customers we have told about our project were very interested right from the start. Sustainability is a major concern in the paper industry."

Klaus Haiden

Photo: Michaela Begsteiger

ONE OF US

Get to know colleagues from around the world and find out more about their jobs and day-to-day work.

This time: **THOMAS KRAUS**, Online Marketing Manager, Corporate Communications

"I find online marketing fascinating because it is so dynamic and transparent"

What are your main tasks as Online Marketing Manager?
I support all our business areas and central functions in their online marketing activities. Our website – andritz.com – is the focus of my work. However, I also assess the other digital communication channels and create processes so that the channels can be used with maximum efficiency. This includes newsletter marketing, our social media activities, and paid online campaigns.

I work very closely together with the marketing managers in the business areas, with IT on the topic of tools, and with the legal department on questions concerning data protection. My goal is to consider our entire marketing infrastructure so that the various tools interact well and support our activities to optimal advantage.

When did you start working in online marketing, and what do you like about it?
While I was at university – studying journalism and corporate communication – I worked as a copywriter for advertising agencies. As those texts had to be entered into websites, I became more and more involved in the online sector. After graduating, I spent several years working for advertising agencies in media planning – from traditional advertising on the radio, TV and posters, to digital channels. Online marketing has always fascinated me because it is so dynamic and transparent. You see the effect it has immediately and can analyze and optimize it thoroughly. I like to be creative, and I like numbers. In online marketing, I can combine these two interests – creative design and detailed analysis.

I joined ANDRITZ in 2016. My first large project was the complete relaunch of the website in 2017. During this project, I got to know the ANDRITZ GROUP's structures and processes quite well.

A lot has been happening at ANDRITZ recently in the online sector. Where do you see the most progress and success?
Top of my list is the fantastic collaboration that has developed with the business areas and central functions in this field. This enables us to make new solutions and improvements available for everyone to use. What's more, we now have a full range of tools for many different online activities. For example, if someone would like to launch an online campaign for a product, there are already clearly defined processes and templates ready to use for this purpose.

Photo: © PopTika – shutterstock

We have organized our social media activities in a professional way – we defined the channels, determined the roles and processes, and we post regularly. The number of our followers on LinkedIn has risen from 120,000 to 450,000 since we started using it professionally.

Our digital communications have increased enormously. All the business areas are very active. Last year, we conducted around 330 online campaigns groupwide and held around 130 webinars for customers. The number of visitors to our website has risen by roughly 10 percent every year.

Where do we still need to improve?
I am certain that we can always do better and that's what I always strive to do, no matter whether a minor task or a major topic. Marketing processes and technologies play an important role here. The fundamental question for me is which tools we really need and how we can connect them in the best possible way so they make our work easier and deliver all the data we need. We want to know with even more accuracy how much output we can achieve with how much input – how many people see us on the Internet as a result of which actions, and what impact this has on the individual phases of customer business until an order is awarded. We are pursuing this vision with our comprehensive MarTech project.

In marketing work itself, we should always keep our eyes on the entire value chain. If we produce good content at some expense, we should also plan activities and a budget to make this content as visible as possible. Here is an example: ANDRITZ produced a high-quality video costing several thousand euros and made it available on YouTube. After one month, this video had 400 views. Then we conducted a YouTube campaign costing 1,000 euros, and very soon, the video had 50,000 views.

What is the main difference between online marketing and traditional marketing? What should we watch out for?
Online marketing and traditional marketing do not compete, but rather complement and strengthen each other. Marketing works best by combining the two. I have also seen this in my work for agencies. All the measures build momentum and achieve a joint effect: an increase in visibility.

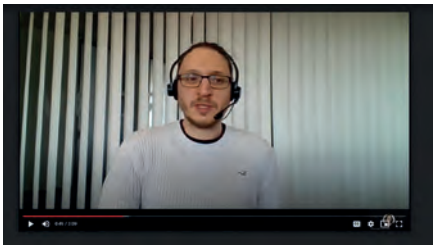
In my view, one of the main differences is controllability. In traditional marketing, I know exactly what my advertisement will look like, but in online marketing I don't. My advertisement can look different on every device, and I have no way of influencing what pops up to the left and right of it. Today, platforms like Google generate advertisements dynamically using artificial intelligence. We provide text and images. Google determines the actual presentation on the basis of performance. It's important to be aware of this.

Another difference is transparency. Although the new data protection regulations somewhat restrict transparency in online marketing, it still remains high. With analytical tools, I can measure very accurately what effect my actions have had.

The ability to focus precisely on a target group is another feature of online marketing. I can define my target group very accurately in online campaigns – a country, a town, or even a specific company or area of interest. This target group can also be reached with a small budget. Online campaigns are possible with just a few hundred euros a month. Of course, time is needed to plan and analyze them.

Do you spend a lot of time online when you are not at work? What do you do in your spare time?
I like to do lots of things: I enjoy sports and listening to music, and I really love to cook and bake. In addition, I read lots of political and scientific magazines, but also novels – I simply enjoy a good story. Of course, I spend a lot of time online, but I often choose quite deliberately to stay offline.

Watch the short video with Thomas Kraus on: www.andritz.com/atoday-thomaskraus



UPCOMING CHANGES IN THE EXECUTIVE BOARD

NEW ANDRITZ CEO: **JOACHIM SCHÖNBECK**

Joachim Schönbeck has been a member of the ANDRITZ Executive Board since 2014. He will take up his new position as CEO at the beginning of April this year. So far, he has had responsibility for Pulp & Paper Capital, Metals Processing, Group Quality and Safety Management, and Group Site Installation. In his new role, he will also oversee Corporate Communications & Investor Relations, Group Human Resources Management and Group Business Development. Responsibility for Metals Processing will be handed over to Domenico Iacovelli.

Joachim Schönbeck was born in Germany. He studied mechanical engineering in Aachen, Germany, and at Massachusetts Institute of Technology, USA, and received a doctorate in engineering from the Technical University of Berlin in 1992.

He began his career working in various positions for Mannesmann Demag AG of Duisburg (later SMS Demag AG of Düsseldorf), latterly as Executive Vice President, Continuous Casting Technology. Subsequently, he headed a division of Siemens AG in Munich. He then became President and CEO of SMS Meer GmbH in Mönchengladbach as well as member and later spokesman of the Managing Board of SMS Holding GmbH in Düsseldorf.

He moved to ANDRITZ in Graz as member of the Executive Board in October 2014.

NEW MEMBER OF THE ANDRITZ EXECUTIVE BOARD: **DOMENICO IACOVELLI**

Domenico Iacovelli is CEO of Schuler AG, with responsibility for the divisions and for Technology, Strategic Corporate Development, Marketing & Communications, and Sales. He will take a seat on the ANDRITZ Executive Board at the beginning of April. In this function, he will be responsible for the entire Metals business area (Metals Processing and Metals Forming – Schuler) as well as Group Information Technology and Group Manufacturing Management.

Domenico Iacovelli was born in Switzerland. Following an apprenticeship as an electrician and electronics technician, he studied business informatics with a focus on application development alongside his work. He then obtained a degree in business administration, also while working full-time.

After working as a project manager in software engineering at two engineering firms, he joined Soutec Soudronic AG, which became ANDRITZ Soutec AG in 2012. He held several managerial positions at Soutec before being appointed the company's Chief Executive Officer in 2011. In addition, he assumed management of Metal Processing's Welding and Stamping division and Schuler's Automation division. He has been a member of the Schuler Executive Board since 2017 and the company's CEO since 2018.

ANDRITZ