



VOITH

THE MAGAZINE FOR VOITHIANS

REPORT

#2 | 2016

FOCUS GROUP CONFERENCE

VOITH – THE NEXT LEVEL

INSIGHT

INTERVIEW WITH OUR NEW
CHIEF FINANCIAL OFFICER

ON SITE

CLEAN ELECTRICITY FROM THE RIVER BRENZ

MILESTONES

WHICH GENERATOR SHOULD IT BE?



Welcome
to the Next
150 Years



Everything in its place: Voith designs and manufactures customized generators for hydropower plants. This is expert work – all Voith generators for hydropower projects are designed at the Brunnenmühle R&D Center in Heidenheim, part of the international Voith Hydro Engineering Center (VHEC).

MASTHEAD

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DEAR COLLEAGUES,



In October we held the Group Conference, the company's most important management meeting, at our headquarters in Heidenheim. At the meeting, Dr. Hubert Lienhard, President and CEO of the Voith Corporate Board of Management, presented the new Voith brand strategy and the company claim that will replace "Engineered Reliability" as of January 2017. Dr. Lienhard also gave some initial insights into next year's planned anniversary celebrations. In this edition of the Voith Report we tell you more about the presentations and hot topics that were discussed at the Group Conference.

We also feature an interview with Dr. Toralf Haag, the group's new Chief Financial Officer (CFO), a report on an inspirational campaign to promote diversity and inclusion in South America, and the next in our series on "Voith's basic technology," which focuses on the development and production of generators for hydropower plants.

As always, the report is rounded off with a portrait of one of our many international locations. In this edition we explore the city and surroundings of Bogotá in Colombia. We hope you enjoy this latest edition of the Voith Report.

I hope you will enjoy the read.

A handwritten signature in blue ink, appearing to read "Lars A. Rosumek". The signature is fluid and stylized.

Lars A. Rosumek
Senior Vice President Group Communications



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View of the building works at the Cambambe II hydropower plant on the Cuanza River in Angola. The plant is scheduled to start producing electricity with a capacity of 700 megawatts by the end of the year.

NUMBERS ONE AND TWO ARE UP AND RUNNING

ANGOLA The first two out of four turbine generator units made by Voith came on stream at the Cambambe II hydropower plant in Angola in July and August – only three years after the company was first awarded the contract to equip the new facility to be built on the Cuanza River. Voith is responsible for supplying the turbines and generators as well as the control and associated systems. The contract also covers the spillways and superordinate control systems for both Cambambe I and II.

The new Cambambe II hydropower plant has been built close to the existing Cambambe I plant and makes use of the same infrastructure and dam, the height of which has been increased by 30 meters. The four turbine generator units to be installed at Cambambe II will have a combined capacity of 700 megawatts, which will see Angola more than double its installed capacity from hydropower. All four units are scheduled to come on stream by December of this year. //



The Hongping pumped storage power plant in China is due to come onstream in 2017.

FULL RESPONSIBILITY

HONGPING/SHANGHAI Voith Hydro Shanghai (VHS) worked towards this goal for four years: On July 21, the first pumped storage unit, with a capacity of 300 megawatts, went into regular operation at the pumped storage power plant in Hongping, China. Three other units are expected to follow in 2017, at which point the plant will be fully operational.

The units with their Francis reversible pump turbines and generators are designed for a maximum head of 580 meters and a speed of 500 rpm – never before has VHS been fully responsible for systems with parameters like these. It managed all the important processes and components, from design, manufacture, and commissioning all the way to the control and auxiliary systems. Voith's partner is China's largest energy utility, the State Grid Xinyuan Company Ltd. The order has a total volume of 70 million euros. //

HI THERE! WE'RE VOITH DIGITAL SOLUTIONS!

HEIDENHEIM The new Group Division Voith Digital Solutions (DS) only started work last April. Obviously, people are still asking what DS actually does. Who are the people who are working on digitization and Industry 4.0 issues on behalf of Voith and its customers? And what are the next steps for this new Group Division?

You can now find the answers to all these questions in a series of videos that have been posted on the Vtube streaming service on the intranet. The first episodes introduce the management team at Voith Digital Solutions. You can access Vtube on Voith's internal network at the following link: [//">https://vtube.voith.net //](https://vtube.voith.net)

COOL POWERHOUSE

MARKTOBERDORF/HEIDENHEIM This fall, the agricultural machinery manufacturer Fendt launched the most powerful standard tractor in the world: the new Vario 1000, which can produce up to 509 hp. A powerhouse of a machine like this naturally requires an equally powerful cooling system, one that for the first time has Voith fan technology at its heart. It is based on the highly efficient cooling systems produced by Voith that have already set new standards in the rail vehicle market.

The fan, made in Heidenheim, is decoupled from the engine speed by its own hydraulic motor and cuts energy and fuel consumption in half compared to standard components. This kind of efficiency also means that the Vario 1000 has no need for large cooling packages. This, in turn, means that the hood can be made shorter and narrower, making the tractor more agile and giving the driver a better field of vision. //



Looking good: the new Vario 1000 from Fendt is the most powerful standard tractor in the world, producing up to 500 hp.

BETTER PARTNERSHIP



A handshake seals the future: Dr. Hubert Lienhard and Li Keqiang sign a new strategic partnership between Voith and CRRC.

BEIJING In mid-June Voith and the China Railway Rolling Stock Corporation (CRRC), the world's largest rolling stock manufacturer, signed an agreement establishing a framework for strategic cooperation. The formal ceremony with Dr. Hubert Lienhard, President and CEO of Voith GmbH, was also attended by China's Premier Li Keqiang and German Chancellor Dr. Angela Merkel. The contracting parties intend to increase their cooperation in global sales of transmissions,

shared use of after-sales services, and intelligent production, among other areas. "Our companies are linked by a long tradition of cooperation," said Dr. Hubert Lienhard, who is also Chairman of the Asia-Pacific Committee of German Business (APA). "The new agreement lays the groundwork for a partnership that both sides will benefit from. And it points towards enhanced cooperation in production between China and Germany," he added. //

UNDERWATER REVOLUTION

OSLO/CRAILSHEIM Voith and the Norwegian company Fuglesangs Subsea AS are currently working together on the development of a hydrodynamic pump system for use in what is known as "subsea boosting." This involves filling oil wells on the sea floor with water in order to achieve a constant level of pressure during production.

The proportion of oil and gas to be found in a given oil field may vary, so

it is important that pump systems are able to adapt to variations in pressure – a standard requirement for Voith's variable speed drives. Integrating a Voith torque converter into the pump system on the sea floor removes the need for electrical control components on the surface. This can save hundreds of tons of topside equipment on surface vessels or platforms and so reduce necessary investments by up to 70 percent. //



TOGETHER FOR ALMOST A CENTURY

PICKWICK/YORK A long-running relationship is being continued thanks to a new contract: Voith Hydro in York, Pennsylvania, is currently overhauling four Kaplan turbines at the Pickwick Landing Dam on the Tennessee River. Thus it is continuing one of the longest business relationships in America's hydropower industry – Voith has played a part in the dam, which went into operation in 1938, for more than three-quarters of a century.

In the years up to 1951, Voith's subsidiary Allis Chalmers supplied six generating units. At that time, the turbine runners were the largest of their kind, with a diameter of more than 24 feet. In the 1980s, the company replaced four of the



Due for an overhaul after 30 years: parts from Voith Hydro Kaplan turbines in York.

runners with more efficient models. Now, after some 30 years of smooth operation, it is time again for an overhaul.

The Pickwick Landing Dam has impressive dimensions. It is 113 feet high and stretches a mile and a half across the river. The facility has a capacity of 229 megawatts. With the 100th anniversary of this relationship on the horizon, Voith is ensuring that the power plant will continue to be a reliable supplier of electricity. //

TRANSFORMANCE – PAPERMAKING 4.0: VOITH PAPER CUSTOMER DAYS

HAMBURG What does the future hold for the paper industry? What role is likely to be played by new technology, digitization, and changes to consumer habits – and which new markets and business models will emerge for the industry as a whole? These were just some of the issues that Voith Paper discussed with industry experts and customers from around the world at a Customer Days event under the banner “Transformance – Papermaking 4.0.” This very special paper industry gathering was held in Hamburg at the end of July.

“A strong partnership with our customers for shared success.” This is how Bertram Staudenmaier, Chairman of the Management Board of Voith Paper, described in his welcome address how the company is planning to tackle future challenges. The event was held in the Mehr! Theater at Hamburg's wholesale market, where 18 speakers discussed the opportunities that Voith already offers its customers to help them produce paper in a competitive and profitable way. The presentations were divided into four key areas: Performance, Transformation, Transformance, and Papermaking 4.0. Delegates also had opportunities for lively discussion at four “Tech Hubs,” manned stands that were dedicated to new technology.

The concept was a huge success. “It's a great event. I appreciate that we have seen a joint company talking to the customers, not just several departments,” enthused Sergey Pondar, Vice President Manufacturing of the Segezha Group in Russia. And Michael Söffge, Managing Director of Steinbeis Holding, commented: “The solutions presented here today are very convincing and point in the right direction. Of course the paper markets will continue to develop differently, so it is good that Voith is offering solutions in every segment.” //



Bertram Staudenmaier, Chairman of the Management Board of Voith Paper, welcomes guests to the Customer Days event in Hamburg.



RAISING THE BAR

The Group Conference 2016 marked a number of MILESTONES. The Group-wide Voith 150+ restructuring program has now been brought to a successful conclusion after three years. Speaking to 500 senior managers from all over the world, Dr. Hubert Lienhard looked back at the successes of the program and **presented a new mission for the future: growth**. FOCUS takes a closer look at how this will be achieved.



Setting the stage for tomorrow: senior executives present their plans for Voith's future at the Group Conference in Heidenheim.



MOVING TO THE NEXT LEVEL

This year's Group Conference in Heidenheim marked a milestone, as the key measures in the Group-wide Voith 150+ success program have now been completed. **Voith is now focusing on growth.** In order to achieve this, President and CEO Dr. Hubert Lienhard presented a new vision and mission for our company and an initial program to fulfill this.

Almost three years ago the Voith 150+ success program was announced with the aim of establishing a solid basis for profitable growth. At this year's Group Conference Hubert Lienhard proudly summarized progress: "Voith has delivered on its promises". Speaking to 500 senior managers from all over the world, Voith's President and CEO looked back on the achievements of the Group-wide success program Voith 150+. Demanding and difficult tasks such as the sale of Voith Industrial Services and the launch of the new Group Division Voith Digital Solutions have been accomplished. The initiatives and measures implemented in the course of Voith 150+ will lead to savings of around 270 million euros for the next fiscal year 2016/17.

The accomplishments of the two Voith 150+ pillars "Clean House" and "Excellence@Voith" are the metaphorical base camp for the company's path to the next level. Reorganization and cost cutting are major steps to improve competitiveness and efficiency at Voith, but they will not take

us to the top. Voith now has to start the journey to the next level, addressing the top line. Hubert Lienhard emphasizes this point, saying: "Growth is our number one goal over the coming years. Companies that do not grow gradually lose influence."

In order to achieve this goal, Voith wants to become "[the technology partner for industrial generations](#)".* This is Voith's new overall vision going forward – the summit and core of all its future actions. It defines the main objective Voith intends to reach in the long run. Lienhard: "We want to set the pace of technological change and development in order to make us indispensable to our customers."

Strong new positioning

But which path will Voith take in the anniversary year 2017 and beyond in order to reach the top? What is needed is new and strong positioning in the markets. The backbone of this positioning remains the 150 years of know-how and intellectual property in engineering that have made Voith a



Summit meeting in Heidenheim: more than 500 Voith managers from all over the world attended the Group Conference in Heidenheim. Voith CEO Dr. Hubert Lienhard and the Board members responsible for the four Group Divisions explain the Company's vision to delegates at the Group Conference.

household name among its stakeholders all over the world. But in times of constant change and the megatrend of digitization, its positioning needs to be more than simply supplying industrial customers with Voith products and services. We have therefore summarized our positioning in two catchy sentences:

*"We advance key industries to tap global opportunities. Our innovations in engineering across cultural contexts create value and trust for generations."**

In this way, Voith is clearly focusing on key industries that are critical for the development of global economies and contribute to global megatrends. Moreover, Dr. Lienhard described how the Voith brand will change in order to achieve the next level of corporate development. Voith's vision – symbolically the tip of the iceberg – is: **Technology partner for industrial generations**. The competencies required for its realization are bundled in our mission statement.

- Earn customer loyalty
- Combine global strength with local entrepreneurship
- Inspire the best in our people
- Strive for excellence in everything we do

Fulfilling our mission means taking specific actions in our daily work. Voith will continue with its successful Voith 150+ program and develop it into the Voith 150+ Next Level program. The redesigned program will comprise six modules:

- Administration Excellence (Lean Office Processes)
- Operations Excellence (OPEX)
- Operations Excellence (OPEX) in Supply Chain
- Sales Excellence
- Product Improvement & Engineering Excellence (EPEX)
- Quality Excellence.

The team responsible for Voith 150+ Next Level will be headed up by Bodo Klein, so far a member of the Voith Turbo Management Board. Siegfried Höna (Change Management), Helmut Maier (Product Improvement & Engineering Excellence), Jürgen Lochner and his Excellence team as well as Alfredo DeMatos (Sales Excellence) will be part of the new 150+ Next Level Group. Together, the project team will develop detailed goals and plans for each of the modules, while implementation will then lie with the Group Divisions. Voith will introduce the Voith 150+ Next Level program worldwide at the Regional Meetings to be held in spring 2017.

Projects and initiatives to fulfill Voith's mission

Along with the Voith 150+ Next Level program, there will also be a number of key projects and initiatives designed to breathe life into the mission statements. These include fostering diversity and local entrepreneurship, strengthening customer-centricity, and securing quality standards. In addition, the company will foster a speak-up culture and encourage employees to take more ownership.



Achieving this requires strong values. “They have been the basis of all our activities for 150 years. They give us the framework in which we operate. Our values, our spirit is what makes us different”, said Hubert Lienhard. “Especially in difficult times they guide us and help us make the right decisions.” Voith plans to use the following four values to improve its orientation and explain it more clearly. Voith is committed to a corporate culture that is shaped by respect, reliability, openness and ambition:

- respectful und reliable
- open und ambitious*

The new Vision, Mission and Values are accompanied by a new outward appearance that will be the new face of the Voith brand in its markets. At the center is the new claim:

Voith – Inspiring Technology for Generations

Its launch will coincide with the beginning of Voith’s 150th anniversary in January 2017. At the same time, a new key visual will be introduced as part of the existing corporate design to mark Voith’s anniversary: a colorful tree trunk in yellow, green, blue and magenta. The tree concept is a metaphor for the years that passed, but it also refers to the growth and evolution of the company to become the “**Technology partner for industrial generations**”.* The campaign logo for the anniversary with its progressive, striking colors will be introduced on December 13, 2016. The existing elements of the Voith corporate design, such as the corporate colors with the famous Voith blue, will remain unchanged. Dr. Hubert Lienhard comments: “The tree rings go perfectly with Voith. We have our roots, we have our values, and we have our history. With the digitization of our industries and the tremendous technological change in the last couple of years, something new is added to Voith that will enrich the company. We will become stronger, more colorful, and more courageous. We are looking forward to Voith’s next 150 years!” //

Respectful*

We respect those beside us and the environment around us. We approach all colleagues, clients and challenges with humility, engaging with ideas and innovations no matter where they originate. We recognize the limits of our own understanding and look to reach beyond them in order to challenge our thinking with fresh perspectives.

Reliable

Our customers and colleagues have relied on us to say what we think and do what we say for 150 years. Being a Voithian means constantly aiming to earn trust by promising only what we can reliably deliver – in order to build strong, lasting relationships.

Open

Turning bold ideas into innovative engineering requires open ears, eyes and minds. They give us insight into where the world and our customers are moving and help us provide solutions that create value and redefine standards in our markets.

Ambitious

We thrive on challenges and set ourselves ambitious goals for individual and business growth. Making crucial contributions to solving global problems drives us forward. Focused on customer-orientation, we aim to simplify complexity and constantly improve upon past successes.

*Please note: The elements of the brand positioning (Vision, Mission and Positioning) have been developed in English and are available only in English.





The Group-wide “Operations Excellence” (OPEX) initiative aims to optimize all processes in production, logistics and the supply chain. The regular factory floor meetings in the factories provide useful feedback.

STRIVING FOR THE BEST

With more training programs, wider areas of application, and four learning factories in the regions, the company’s Group-wide initiative Operations Excellence (OPEX) **is making great strides**, spurred on by three successful years since its launch.

Voith’s “Operations Excellence” (OPEX) – the program designed to optimize all processes in production, logistics, and the supply chain – is a centrally organized Group-wide initiative that was launched three years ago. Since then, it has been introduced at every location and even further enhanced. Several new elements have been introduced along the way so that OPEX now incorporates the OPEX Way 1-4-9-9, eight OPEX methods, appropriate KPIs, a range of training programs, OPEX Assessments, OPEX Regional Conferences (held for the first time in 2016), and numerous examples of successful implementation by the company’s 70+ facilities, which are all optimizing their processes using the OPEX methods.

The OPEX Assessments show that the status of the participating production facilities has on average improved from 59 to 67 percent. OPEX has clearly developed into a company-wide movement that includes the production facilities and many adjacent areas. Processes are being analyzed, KPIs measured, and continuous improvements being made. Numerous changes – both major and minor – have been introduced, and many of the production facilities are now looking much better than three years ago, with processes that are leaner and therefore faster. “We have made savings of more than 100 million euros in inventory and more than 50 million euros in production costs. Everyone at Voith can be very proud of these achievements,” says Jürgen Lochner,

Vice President Corporate Excellence, who has been responsible for the expansion and development of OPEX in cooperation with the Group divisions from the get-go. And what lies ahead?

Lochner and the staff who are responsible for OPEX in the regions and production facilities, around the world have some interesting changes up their sleeves for the 2016/2017 financial year – now the plan is to take OPEX to the next level!

For one thing, the application of the OPEX principles and methods is to be extended to the engineering supply chain, encompassing suppliers, production facilities, and construction sites. This will allow us to adapt what we have learned from OPEX in the production facilities to benefit other areas of the business.

New OPEX training programs for all management staff in the factories will also be introduced. The closer involvement of plant managers and supervisors will mean OPEX can be run more successfully and independently at local level. OPEX specialists will continue to be on hand to give help and advice on the implementation of OPEX and to work alongside local management on the progressive optimization of the supply chain.

Another new feature will be the OPEX learning factories, which are currently being set up in the Voith training centers at Heidenheim and Kunshan and in the São Paulo and Appleton/York production facilities. From 2017 onwards, these learning factories will provide training on the application of the OPEX methodology. They will initially be aimed at management staff in the production facilities. The plan is to then expand the training to include all Voith staff from the

2017/18 financial year. Changes will also be made to the OPEX Assessments, which in future will be carried out in two different ways. Production facilities whose OPEX status was below 69 percent in the previous financial year will continue to be audited by a team from Corporate Excellence and the group divisions. Meanwhile, those facilities that have achieved more than 69 percent will carry out a self-assessment and pass on the results to the Corporate Excellence team. The following year, the process will then be the other way round: self-assessment for those facilities with an OPEX status below 69 percent, and an external audit for those with a status above 69 percent.

Another key aspect of the future changes is explained by Jürgen Lochner: “Management staff and OPEX specialists in the production facilities will do everything they can to hit the targets on cost and inventory reductions and the OPEX KPIs. For additional support they can turn to the measures set out in the Master Plans, which have been developed on the basis of the True North principle and the process vision.” Should senior managers at a production facility not achieve the agreed targets for the financial year, they will need to take additional short-term actions.

The managers responsible for OPEX and local production managers at the regional conferences discussed many of the changes in early 2016. The main focus of these discussions was on the implementation of OPEX in the production facilities and the supply chain. Jürgen Lochner explains the initiative's main objective: “OPEX is designed to facilitate the work of all Voith staff and make ongoing improvements to the ways we meet our customers' needs – every single day.” //

The aim of OPEX is to create the perfect Voith factory with lean processes. The True North principle has been developed based on customer needs, and its implementation in the financial year is carried out in line with the Master Plan.





DIMENSIONS OF DIVERSITY

The purpose of the **Group-wide initiative Diversity & Inclusion** is to promote employee diversity at Voith in order to increase the company’s innovative strength and ability to meet future challenges. The specific measures differ from region to region. An example from Voith in Brazil.

Diversity and Inclusion, D&I for short, is a Group-wide initiative which aims to make diversity and inclusion an integral part of Voith’s corporate culture on every level. The initiative has existed for almost four years and involves our global sponsor Dr. Roland Münch, CEO Voith Digital Solutions, along with other sponsors and managers, so called D&I advisors, in every region. The core principle is that diversity in terms of gender, nationality, culture, age, generation, profession, and other individual differences is a valuable asset at Voith that must be promoted – in order to be able to fulfill and reflect the diverse customer needs.

At Voith we want to have an inclusive work culture, a culture of mutual respect which is open for different ideas and perspectives. One reason is that toleration of differences

is fundamentally important. Diversity is a source of great potential from a purely economic viewpoint. Another is that inclusion aims to take advantage of this mix of different ideas, backgrounds, and approaches to create business value. Numerous international studies have shown that companies with a heterogeneous workforce are better able to meet the challenges of globalization and of increasing complexity in the business world.

But how can a company cultivate diversity in practice? Employee awareness, acceptance, and participation are critical.

One creative approach is currently being demonstrated by Voithians in Brazil. In late 2015, a D&I campaign was launched in São Paulo. Rather than prescribing top-down



A Diversity & Inclusion campaign was run in São Paulo in summer 2016. The staff at this location had an opportunity to talk about what D&I meant to them.

solutions for diversity and inclusion, it put the focus on ideas from the employees themselves.

The impetus came from Flavio Silva, President of Voith Paper South America and D&I Sponsor for South America: “We want to promote D&I without telling employees what to do. The message should be: Your opinions on this topic are important and valuable.”

Implementation, part one, summer of 2016: Employees at the São Paulo plant were informed of the campaign and asked what D&I meant to them personally. For this purpose large billboards were set up at the exits to the cafeteria, where employees could add their thoughts. In addition, Voithians, whether from production, administration, or the executive level, had a chance to be photographed next to the Voith mascot, Fred, and take home a free print.

“We were delighted by the success of the initiative,” says Ligia Palma, Manager of D&I for South America. “What surprised us when we evaluated the results was the word that employees most frequently associated with D&I, and by a wide margin: respect. It was followed by the words love, tolerance, dialog, empathy, and peace.”

Implementation, part two, is starting in the coming weeks: Employees can write their personal stories concerning D&I and drop them in boxes in the cafeteria, or send them via e-mail.

Implementation, part three, will sum everything up: “We will soon publish the results of all the initiatives in order to give employees a better understanding of the many meanings

of diversity and, ideally, generate more discussion,” says Ligia Palma.

The campaign and the associated initiatives will soon be launched at other locations in Brazil, as well as Chile, Colombia, Argentina, and Peru. “I’ll be interested to see what colleagues in other countries think about D&I,” says Flavio Silva. “Moreover, I can conceive repeating the survey each year and comparing the results – because the meaning of diversity, just like life, is always changing, and it is always a good chance to think again and to improve ourselves.” //



A DEDICATED MEMBER OF THE VOITH TEAM

It's the end of an era: **After more than 30 years, Dr. Hermann Jung is bringing the curtain down on his career at Voith.** He joined the company as a trainee and eventually rose to the position of Chief Financial Officer.

These days it is quite unusual for someone to spend almost their whole career – 31 years in fact – at one company. It's even more unusual for that person to have a career that sees them go from trainee to board member.

Dr. Hermann Jung was responsible for Finance and Controlling on the Voith Corporate Board of Management. In September 2016 he finally brought this career, and his active role in the company, to an end. His successor, Dr. Toralf Haag, took up his new position on October 1, 2016.

But let's turn the clock back to 1985. When Dr. Hermann Jung joined the accounts department at the Heidenheim head office, he was Voith's first ever trainee. Before joining the company, this native of the Rhineland-Palatinate region obtained a degree in Business and Industrial Engineering at the Technical University of Darmstadt before studying for his doctorate in Business Administration at the University of Stuttgart. His time in Stuttgart also saw him take the first steps in his professional career by working for the Institut für

Unternehmensanalysen (Institute for Business Analysis) and the management consultancy firm IFUA.

Voith was quick to recognize Jung's obvious talents and he was soon given opportunities to gain experience throughout the Voith group – including as Accounting Manager at Voith Morden, Head of Finance at Scharmann Machine Tool Corporation (both in the USA), and as Vice President of Finance and later Chief Financial Officer (CFO) at Voith in São Paulo, Brazil.

In 1991, Jung returned to Heidenheim with his wife and three children in order to take up the position of Divisional Vice President Finance and Accounting. Three years later, he became a member of the Management Board of Voith Paper before joining the Corporate Board of Management in July 2000 as CFO, with responsibility for Finance and Controlling.

Over the following 16 years, Jung made an important contribution to the group's strategic decision-making and was actively involved in the acquisition of DIW, along with



other companies such as Premier, Jagenberg, Kvaerner, and Finckh.

During his speech on the occasion of Dr. Jung's 60th birthday last summer, Dr. Hubert Lienhard, President and CEO of the Voith Corporate Board of Management, referred to Dr. Jung as a "dedicated member of the Voith team" and told the guest of honor: "With your successful career with us and the positive traits that have been required to build it – persistence, hard work, modesty, ability, dependability – you are the very embodiment of our Voith values. And every day you manage to communicate these same values to your staff."

Professor Hans-Peter Keitel, Chairman of the Supervisory Board and Shareholders' Committee said of the departing CFO: "The staff, Corporate Board of Management, Supervisory Board and Shareholders' Committee all have huge respect for Dr. Hermann Jung's excellent work and his loyalty to the Voith Group for so many years, and we

would like to thank him most sincerely for the service he has rendered. He embodies the values of our family-owned company and has served Voith admirably."

Dr. Hermann Jung has certainly left his mark on the company. Now it is up to his successor, Dr. Toralf Haag, to take up the baton and make his own mark on the Finance and Controlling department. Professor Hans-Peter Keitel has no doubts about his ability to do this: "In Toralf Haag we are gaining a proven, internationally experienced financial expert and manager. We will benefit from his fresh perspective on our company's activities and his strong expertise." //

“WE CAN PUSH AHEAD INTO NEW AREAS”

Dr Toralf Haag joined the Voith Corporate Board of Management, where he is responsible for Finance and Controlling, on October 1, 2016. In this interview he talks about his **goals, the Group’s strengths, potential improvements and Voith’s very special corporate culture.**

Dr. Haag, what are your main objectives for these early days in your new position?

My main aim is to ensure the development of the Finance and Controlling function as a whole. There is scope for optimization. We have identified ten processes that we see as priorities in the short, medium and long term – including audit, treasury, tax, cash flow and the incorporation of Shared Services into Global Business Services. At the moment we are still in the coordination phase and are looking to develop a detailed action plan by December.

How do you view the long-term role of your department in the Group as a whole?

I believe we can take advantage of the rapid developments in digitization and IT. My vision is to have a fully-integrated digital finance and controlling system that allows information to be accessed quickly and on time. Integrated reporting should be fully automated so that staff in Finance and Controlling can concentrate their efforts on actively driving forward the business in all areas of the Group. For example, they could support the heads of the various Operating Units in defining and measuring appropriate performance indicators, the so-called KPIs. Staff could also generate creative ideas for optimizing investments, contracts, cash flow management and acquisitions – and in this way help to improve overall Group results.

How do you assess the company’s current financial situation?

As I explained at the Group Conference 2016 in Heidenheim

a couple of weeks ago, the company’s financial situation needs to be assessed in terms of three key criteria: financial risk, profitability and strength of cash flow. With regard to the first of these, Voith is very well placed. The sale of Voith Industrial Services and the reclassification of our Kuka shares have generated cash income so that we are now net debt-free. This situation will further improve when we sell our shares in the Kuka AG while our equity ratio will rise significantly. We also have long-term financing in place. In terms of profitability, we aren’t quite where we want to be yet, but we are heading in the right direction and are aiming

for improvements in our operational activities. Our return on sales currently stands at 6.5 percent, while our return on capital employed is at around 13 percent. As for the third criteria, our operating cash flow looks relatively good at the moment, but there is definitely room for improvement as far as free cash flow is concerned.



Dr. Toralf Haag joined the Voith Corporate Board of Management on October 1, 2016, where he is responsible for Finance and Controlling.

At the Group Conference you not only updated participants on the current state of affairs in your own department, but you also found out more about Voith’s new brand positioning. What impression did you come away with?

A very good one. The Voith name stands not only for a long tradition but also for outstanding technologic know-how and market leadership. The new positioning strengthens the image of both the brand and the company. When I was preparing to take on the job of CFO, it quickly became clear to me that Voith enjoys an excellent global reputation. We need to take advantage of this reputation and build on it in order to meet our goals for sustained growth.



What do you think will prove to be the biggest challenges for Voith in the current financial year?

First of all, the unremitting global competition. The second is ensuring that we compensate for the rise in certain cost items, especially inflation-related costs in human resources and raw materials. The third major challenge relates to market leadership. Voith is currently in the top three in every market we're active in, and it's important to maintain that.

On a completely different subject: what was it about becoming the CFO of Voith that excited you the most?

I was really excited about the company's reputation, its long tradition and its market position. And, of course, the opportunity to help drive the company forward, as Voith has the potential to grow even more, particularly in the Group's four existing divisions. Voith Digital Solutions alone offers huge potential for growth. But with the financial resources that are now available to us, there is also potential to expand into new business areas, perhaps through strategic acquisitions.

You worked for many years in the USA and Switzerland and got to know a number of different companies – now that you've joined Voith, what's your impression of the corporate culture here?

Every country is different, but every company is most definitely different, you can't really generalize. But I like what is now often found in forward-looking German companies: A mixture of the "German virtues" of quality, reliability and technological know-how, combined with a culture of pragmatism, teamwork and collaboration. It seems to me that this combination is very much in evidence at Voith. In short, it's a pleasure to work here.

Finally a quick question for Toralf Haag the private individual: what are your passions outside of work; what do you enjoy doing and what helps you to recharge your batteries?

Sport for one thing. I go running practically every morning and at weekends I like to go skiing, walking or I play golf. I also find inspiration and relaxation in contemporary art such as photography. I really enjoy attending classical concerts by composers such as Chopin, Beethoven and Mozart – I'm already looking forward to seeing what's on the programme for next year's opera festival in Heidenheim. //

About Dr. Toralf Haag

After gaining his degree in Business Administration from the University of Augsburg and his doctorate from the University of Kiel, Dr. Haag began his career at Thyssen Handelsunion AG in Düsseldorf in 1994. From 1997 to 1999 he held the position of Director Finance, M&A and Corporate Development at the Budd Company Detroit, USA, a subsidiary of ThyssenKrupp. In 2000 he was appointed CEO of the company's Stamping & Frame Division. From 2002 to 2005 Dr. Haag was CFO of Norddeutschen Affinerie AG, now Aurubis AG, before becoming CFO of the Swiss chemical and pharmaceutical company Lonza Group AG in 2005. Since October 1, 2016 he has been responsible for Finance and Controlling at Voith.



Voith Paper is well set up for the future – this is the key message behind the communication campaign “Papermaking. Next Level,” a new initiative to reposition the division with customers and business partners.

NEW CAMPAIGN FOR VOITH PAPER

Voith Paper reinforces **its position as an industry leader** with its new communication campaign “Papermaking. Next Level”

Voith Paper is well set up for the future – this is the key message behind the communication campaign “Papermaking. Next Level,” a new initiative to reposition the division with customers and business partners. Nowadays paper manufacturers have to focus more than ever on the profitability and efficiency of their processes. As in many other industries, producing quality products with low production costs and fewer resources is the key to achieving this and remaining competitive. Voith Paper is ideally placed to help its customers develop, implement, and continuously enhance the right solutions to their particular needs. Over the last 150 years, Voith Paper has made its stamp on the paper machinery market more than any other company. During this time its engineers have internalized the whole of the paper manufacturing process and worked to keep it moving forward. “Our cutting-edge technologies, intelligent products, totally new

services, and digital solutions like Papermaking 4.0 are making paper manufacturing of the future possible,” explains Bertram Staudenmaier, Chairman of the Management Board of Voith Paper. “And these are the messages that we now want to communicate again, loud and clear.” He believes Voith Paper’s employees are at the heart of the company’s success and its unique position in the market: “Thanks to the dedication of every single employee of Voith, we are ideally placed to meet the challenges of the market. It is your expertise and your passion that will give our customers the crucial competitive edge as we move into the future.” Voith Paper is using a wide range of communication channels to get its new message across, including intranet, social media, trailers, mailings, adverts, and brochures. //

FORGING CLOSER TIES

In the South American market, Voith's visibility is greatest in Brazil, **but the company is present throughout the continent.** This is the message of a campaign that is addressed to both employees and customers.

Voith has been in Latin America for more than 50 years. It opened its first subsidiary in São Paulo in 1964. Since that time the company has expanded its operations, and it currently has some 2,900 employees at 23 locations in Brazil, Argentina, Peru, Chile, Colombia, and Mexico. The public is not yet especially aware of this, however. Gilson Campos, Director of Corporate & Market Communication at Voith in Latin America, explains: "Voith is well established in Brazil and its name is widely known. We want to draw attention to the fact that our company is active in five other countries as well."

For this purpose Voith launched a multi-stage campaign in early 2016 called "One Voith Latin America." Its purpose is to strengthen the Voith brand throughout Latin America in keeping with the company's umbrella brand strategy. The campaign has both an external and an internal component. That is, besides being directed to customers and suppliers,

it is addressed to employees in Voith subsidiaries outside of Brazil.

One of the main goals of the campaign is therefore to provide better support to employees whether in sales, service, or general handling of customer inquiries. The Communications Team in South America has asked themselves the following questions: "What can we do to make them feel more like part of the Voith team? And what can we do to help them?"

"'One Voith' actually means what it proposes," says Gilson Campos. "So we put intense focus on the whole of South America, and rethink all our processes to include everyone. For example, a communication package is being sent to all locations in Latin America. It will provide help in forging contacts with customers, and will also communicate the message that we are a team that transcends national borders."

The target is to create a new basis of trust. "We are now receiving significantly more inquiries from colleagues

The South American market recognizes Voith mainly in Brazil. However, the company is active throughout the whole continent, and the "One Voith Latin America" campaign should emphasize this towards employees and customers.



in other South American countries, and we are being asked more often for support in preparing for meetings with customers," says Campos.

The help is clearly appreciated. "One Voith Latin America is making us stronger and is improving our standing with customers because they see how well positioned we are in the region," says Daniel Rubinstein, General Manager at Voith Hydro Colombia. And Marcus Gaetani, Engineering and Operations Manager at Voith Paper Argentina, adds: "We've been in Latin America for more than 50 years – the campaign will strengthen Voith and ensure its long-term presence." //

BACK ON TRACK

Voith's **OPRA asset life cycle management system** allows Saar Rail to keep better control of its vehicle fleet.

Eleven million metric tons, every year – this is the amount of steel that is transported by Saar Rail for its parent company, Saarstahl AG, to its German production sites in Völklingen, Burbach, and Neunkirchen. On top of this, Saar Rail transports a further 2.5 million metric tons on the Deutsche Bahn rail network to Germany's major ports, and from here the steel is sent all over the world.

The steel is carried by a vehicle fleet of 14 locomotives, 330 company-owned and 360 leased wagons – but they can only do this properly if their deployment, monitoring, and servicing all runs like clockwork.

To achieve this, Saar Rail has been using Voith's asset life cycle management system known as OPRA (Optimized Proactive Life Cycle Approach). This system minimizes downtime and problems with the vehicle fleet and reduces maintenance costs. At the moment the company is optimizing the use of two Voith Gravita locomotives that Saar Rail bought in 2011. "Because this has increased the availability of the vehicles, we now also want to upgrade our other 12 locomotives so that they are really state of the art," says Mike Schmidt, CEO of Saar Rail.

He uses real-time condition monitoring on a daily basis to track the locomotives' fuel consumption and, for

"OPRA ensures reliability, availability, and punctuality – which is good for our customer, Saarstahl."

Mike Schmidt
CEO of Saar Rail

example, it gives him information on the engine's condition. The Web-based OPRA system stores all vehicle data, manufacturers' certificates, permits and service schedules, and service reports are also kept up-to-date online. "The Federal Railway Authority requires us to keep a transparent maintenance record," says Schmidt. "OPRA makes this easy to do."

Saar Rail locomotives have access to mobile data so Schmidt can use the Voith app to plan how to best deploy them over the 96-kilometer-long internal rail network. "OPRA ensures reliability, availability, and punctuality – which is good for our customer, Saarstahl," says Schmidt. //



Saar Rail trains transport more than 13 million metric tons of steel every year.



ON SITE

Peter Spreng (left), Voith Start-Up Manager, and Sjon Vrieze, Project Manager at Smurfit Kappa, are delighted with the overhaul of the PM 1.

SUCCESSFUL NEW BEGINNING

Voith has ensured that the PM 1 used by paper manufacturer Smurfit Kappa is now faster and more efficient – working to a tight deadline and in **a tight space**.

Paper manufacturers Smurfit Kappa asked Voith Paper to take on a new, very challenging job – to modernize the PM 1 at its Dutch base in Roermond. The machine has been providing excellent service for forty years. The aim of this overhaul was to speed up the machine in order to make it possible to produce testliners and corrugated materials more cost-effectively. The logistics industry in particular is always looking for lighter packaging materials in order to reduce transport and dispatch costs.

Voith had just 47 days to carry out the modernization work. This was the time that was available for its experts in between shutting down the old machinery on February 1 and starting it up again after the modernization work. During this time they replaced just about every component – only the

screen with the headbox and the winding were retained.

On top of this, the available space was very tight. The paper plant is located on an older industrial park that has grown over time – so it was impossible to expand the production facility. This meant that a hydraulic unit for the NipcoFlex press had to be placed in a cellar with a ceiling that in places was just 1.89 meters high. Just like tailoring a bespoke suit, the individual sections had to be specially made for the machinery and then assembled in the cellar. The specialists found it was particularly useful to carry out a 3D scan of the PM 1 in advance.

“It was these very particular challenges that led us to choose Voith when looking for the right company to work with,” says Jo Cox, CEO of Smurfit Kappa in Roermond. During

the job, the client and Voith coordinated the many teams involved in the various site activities. “Sometimes we had people from 15 different countries on the site, but the work still went on safely and without a hitch,” says Cox.

In order to improve competitiveness still further, Smurfit Kappa has switched production to lower grammages. In the past the PM 1 was used to make paper up to 200 grams per square meter, but now testliners and corrugated materials with grammages of 90 to 135 grams are produced on a track width of 4,980 millimeters. The raw material is exclusively old paper. //



At the ground-breaking ceremony for the “Alte Bleiche” project in Heidenheim.

LEADING BY EXAMPLE

Normally Voith Hydro equips hydropower plants for customers all over the world, but the **Alte Bleiche small hydropower plant** is located at the heart of the company’s main premises in Heidenheim.

In future anyone who wants to know how electricity is generated and is interested in taking a close look at a hydropower plant can learn more about it on the company’s premises at the Voith headquarters in Heidenheim.

Just a few steps from the locksmith’s workshop where it all began for Voith 150 years ago, the company has built a small hydropower plant on the River Brenz that can be viewed by customers and staff alike. The groundbreaking ceremony for the Alte Bleiche plant took place in the spring, and it should be completed by the end of 2016, including a showroom and technology room for visitors.

This small hydropower plant is being installed in an existing weir system on the river, and the electricity is generated by a Voith StreamDiver turbine generator unit that has been especially designed for river construction with low gradients, so it is ideal for this location. It has been made possible by a shaft power plant, a particularly environmentally friendly solution where the turbine and generator are located beneath the surface of the water in a shaft that is built on the river bed. “With an installed capacity of 35 kilowatts, the plant can produce 286,000 kilowatt hours of green electricity a year. This roughly corresponds to the annual consumption of 100 households – but we feed the electricity directly into our production facility,” says Klaus Schaedler, Head of Small Hydro Technology Development. A special feature of the project is the close involvement of Voith’s technical

apprentices. For example, they have been looking after the design, manufacture, and assembly of the turbine and the construction of the control box. Students at Baden-Württemberg Cooperative State University have also been involved in the areas of design and project management.

Erwin Krajewski, Voith’s Head of Training in Heidenheim, comments: “The Alte Bleiche small hydropower plant is a major interdisciplinary project for our apprentices. This project also allows us to raise our profile as an attractive employer of apprentices in the region.” //



The StreamDiver will come onstream at the end of 2016 – the turbine generator unit is ideal for use on the River Brenz.

TWO UNDER ONE ROOF

Successful double project: Chinese paper giant Sun Paper put two Voith **paper machines** into operation this summer, **the PM 31 and PM 32.**

China is the country with the earliest written record of a papermaking process, going back almost 2,000 years. The inventor is said to be Cai Lun, a Han dynasty official. And today China is the country which produces by far the greatest quantity of paper in the world, more than 100 million metric tons per year. Sun Paper, based in Shandong Province, is one of China's leading paper manufacturers and one of the country's 500 largest industrial enterprises. Its paper plants have a total annual capacity of 4.5 million metric tons. This summer, the company put Voith's PM 31 and PM 32 into operation at its Zoucheng location, making it the first Chinese company in this sector to have two different packaging paper machines installed in a single factory building. The two machines are able to produce up to 800,000 tons of paper each year.

The new PM 31 operates with three MasterJet Pro headboxes, the Tandem NipcoFlex shoe press and the

SpeedSizer applicator unit, all from Voith. It can produce up to 1,200 meters of testliner per minute with a web width of 6,660 mm. The basis weights range from 110 to 250 grams per square meter.

Voith and Sun Paper employees worked together tirelessly from the start of machine installation in October 2015 to completion, nine months later. Their efforts paid off: The PM 31 began to produce marketable paper already on the first day after commissioning.

Startup of the PM 32 went just as smoothly. This machine specializes in fluting and testliner in the weight range between 90 and 140 grams per square meter. In addition, it is the first machine in which Voith installed the highly efficient MasterJet Pro F/B2 headbox. //



Sun Paper has commissioned the Voith PM 31 and PM 32 at its Zoucheng plant.

WISHES COME TRUE

Feedback from customers about the operation of Voith's products and components is valuable to Voith. For example, a report from users in the USA recently led to the **development of an improved torque converter**.

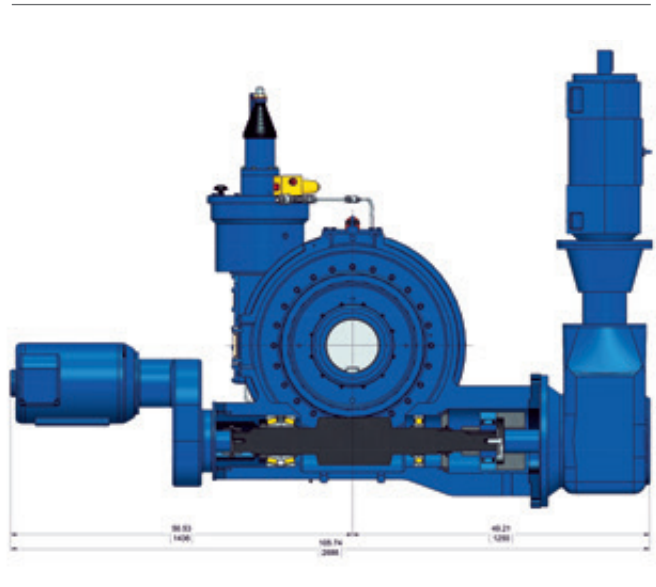
Voith technology often represents the state of the art in its particular field, one reason being that Voith is continually making its already excellent components just that little bit better. The direction of these improvements and upgrades depends to a large degree on feedback from customers who offer suggestions based on their experience.

At Voith Turbo in York, Pennsylvania, specific feedback from customers led to the redesign of a Voith torque converter used in start-up systems for a particular type of gas turbine. This torque converter plays an important role in the cool-down process when stopping a turbine and when starting or commissioning a turbine after it has been switched off. Normally the integrated rotor turning gear in the torque converter ensures that the drive train maintains a constant low speed of three revolutions per minute during starting and stopping procedures.

Customers submitted a request to Jim Kosalek, Vice President Service Sales USA & Mexico, and Bob Wasik, who is responsible for modifications and special products in this area. They needed a torque converter that permitted higher rpm in order to reduce wear on the equipment.

"So we brought our after-market team together with the designers at Voith Turbo in Crailsheim in order to find a solution," says Kosalek. Within a few weeks they came up with rotor turning gear with two speeds and the ability to consistently drive the turbine at speeds of up to 120 rpm. The advantages for the user are less wear, lower maintenance costs, shorter downtimes, and higher productivity.

The first of these new torque converters will be delivered in December to a power station in the US state of Georgia. And the potential for additional orders is enormous. Some 250 of these special Voith torque converters for starting and stopping gas turbines are currently in use in the USA. //



The new torque converter makes it possible to achieve higher speeds of up to 120 rpm.



POWERED BY ELECTRICITY

Whether it's in Helsinki, Manila, or Shenyang – **rail vehicles all over the world are powered by electric drive systems made by Voith in St. Pölten. And the engineers** believe they have the potential to be used in many other applications.

Urbanization is a global trend. Major cities on every continent are growing, and the steady influx of new inhabitants heightens the need for intelligent concepts for public transport systems. More and more major cities are tackling this challenge by expanding and modernizing their tram and light rail systems, and they are increasingly powered by Voith's electric drive systems.

Over the last three years, Voith has supplied Helsinki and the Chinese provincial capital of Shenyang with low-floor trams, along with high-floor trams for Manila in the Philippines. The design and manufacture of the main components for these electric drive systems is carried out at Voith Digital Solutions in St. Pölten. This division employs around 50 staff members, including Alfred Gmeiner-Ghali, Head of Marketing & Business Coordination: "The design of the electric drives is based on our customers' requirements, as they are looking for customized solutions and wherever possible, they want to reuse existing modules." For example, the size of the tram, its speed, acceleration and braking performance, the number of passengers and topographical features of the cities – all have to be taken into account in the design work. Realistic simulations of different models are produced in order to design the optimum drive system with the aim of keeping the vehicles' lifecycle costs and energy consumption as low as possible.

Once the engineering phase is completed, manufacturing of the components begins. "The key element is always the traction inverter," says Gmeiner-Ghali. At Voith this is known as the EmCon, and its job is to convert the electrical energy that is fed in as efficiently as possible and supply it to the drive motors in the right form. The conversion of energy, for example of DC into 3-phase AC with the corresponding dynamic behavior, is carried out by state-of-the-art power electronics.

Another component is called the SuperCaps, a capacitor system. In Shenyang, some sections of the tram lines do not have overhead wires, so they are powered by SuperCaps. They store and release energy, all controlled by a power inverter.

Voith's electric drive systems have a wide range of applications, including tram and light rail systems, subways, electric and diesel-electric traction units and locomotives, and hybrid solutions. In principle they are also suitable for other applications outside the mobility area, according to Gmeiner-Ghali: "They could also be used in industrial applications with speed-controlled drives that require a particular start-up behavior, such as conveyor belts." //

TRUE EXPERTISE

In this issue, the Voith Basic Technology series looks at generators – **the components that ensure hydropower is turned into electricity.**

What a monster: the biggest, heaviest, and – with an output of 944.5 mega-volt ampere – the most powerful generator that Voith has ever designed, weighs 3,650 metric tons. This corresponds to 600 full-grown African bull elephants.

This special generator is part of a 365-million-euro order that was received this spring for six generator turbine units for the Wu Dong De hydropower plant on the Jinsha River in China. It is scheduled to come on-stream in 2020.

The generators for this project – as for all our other hydropower projects – were designed in the Brunnenmühle research and development center in Heidenheim, part of the international Voith Hydro Engineering Center (VHEC). This Center is made up of three key divisions: Turbine, Generator, and Methods & Science.

The basic functions of a generator are always the same. They are based on the physical principle of electromagnetic induction.

In a hydropower plant the generator converts the rotational energy of a drive shaft (which is rotated by a turbine set in motion by the water) into electricity. The drive shaft drives the rotor of the generator. It consists of a series of electromagnets arranged in a ring and turns in a stator, a huge copper coil. This creates a magnetic field and generates electrical voltage.

But, just as every hydropower plant on earth is unique, Voith's generators are also always tailor-made.

Mechanical engineer Alexander Kunz at the Brunnenmühle R&D Center explains: "Diameter, number of rotations, voltage, and output are all important figures for us. We also look at whether the generator is air- or water-cooled, and whether it is installed vertically or horizontally. All this is important if we are to meet our customers' requirements, without ignoring the power plant's specific conditions."

Kunz and the other 30 members of the design team need a great deal of patience, because just the first phase – the system engineering phase when the generator is designed down to the tiniest detail using simulations – lasts around one year, then engineering the individual components takes another 18 months. Production is carried out in Shanghai and São Paulo, and additional manufacturing of the poles and stator cores is done in Heidenheim, with pole production also taking place in Mississauga, Canada. Depending on the number of machines required for a project, production can take up to a year. It can take up to two years from installation in the hydropower plant to final signing-off after start-up. Then it is handed over to the customer and the final guarantee tests are completed.



Impressive size – the new rotor is installed in unit 5 of the Revelstoke power plant.

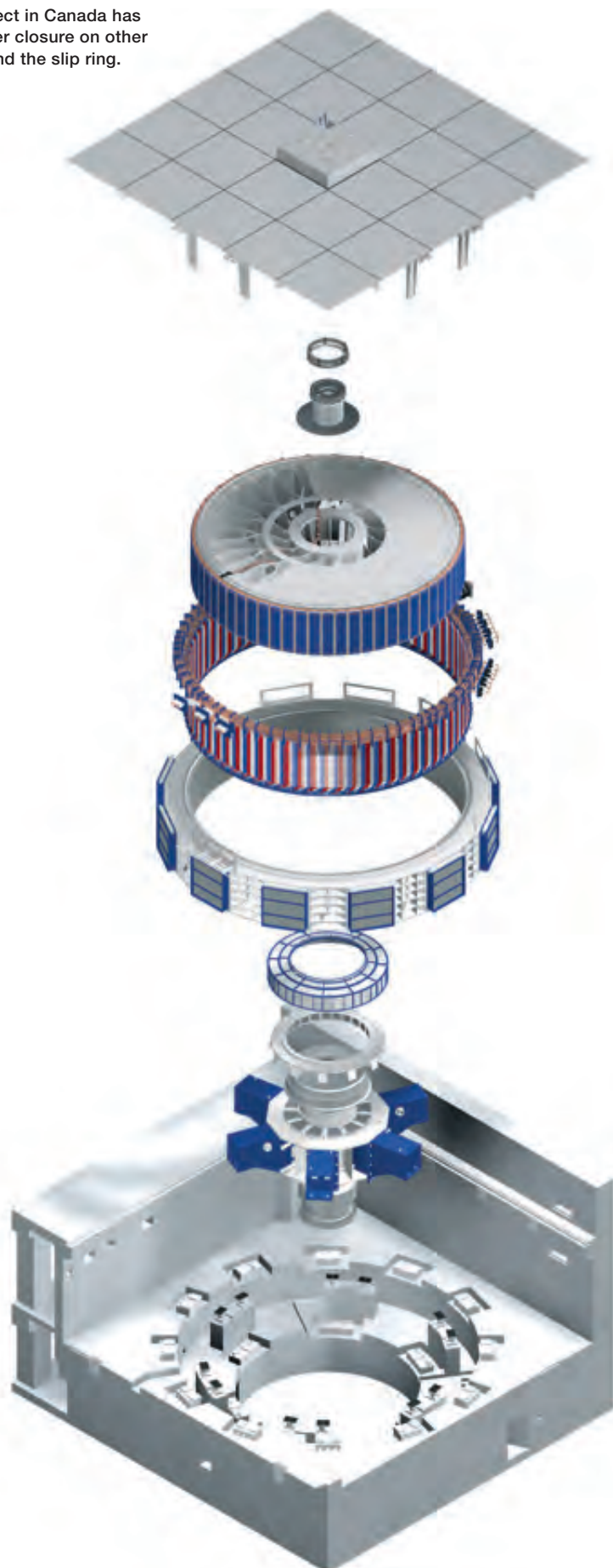
A detailed view: this generator for the Revelstoke U5 project in Canada has two special features. It has no guide bearing and the upper closure on other generators is normally located between the upper shaft and the slip ring.

“A normal cycle takes five to eight years,” says Kunz. “I have been working at Voith for ten years. In 2014 I did the final test for a project that began with our tender in 2006.”

Along with designing and manufacturing generators for new hydropower plants, another area with potential for growth is the replacement and modernization of existing components. Alexander Kunz explains why this is the case: “A great many hydropower plants were built up to around 1980 and their power units are now being gradually modernized. After around 20 years the stator winding on the generator normally has to be replaced because the insulation begins to fail. And after 40 years it is usually time for the generator to be completely replaced.”

In Canada, for example, a number of these contracts have been awarded of late; Voith supplied the turbine and a complete generator for unit 5 of the Revelstoke power plant. Voith has also been responsible for replacing generators or generator components for other BC Hydro projects.

For Alexander Kunz, it makes no difference whether it is a brandnew project or a case of replacing the generator in an existing hydropower plant, because he quite simply loves his work: “The generator is always the heart of the power plant. At the end of the day it ensures that water is converted into electrical energy.” //



IN THE LAND OF GOLD



If you want to fly high, Bogotá is the place for you. But beware: **Colombia's capital city in the Andes** can leave you breathless. Felipe Muriel Arevalo, Chief Financial Officer at Voith Turbo in Bogotá, tells us why.

Dear Voithians, anyone undertaking a trip to Colombia's capital city Bogotá should be in good shape. Located in the middle of the Andes, the place I call home has an average elevation of 2,640 meters (8,661 feet). The metropolitan area's nearly eight million inhabitants are used to it, but anyone coming here from lower elevations and spending much time walking on foot can become quite breathless thanks to the lower air pressure. Therefore you have a good reason to make frequent stops and spend some time in Bogotá's numerous cafés, restaurants and parks.

A good place to start your stroll through the city is Plaza Bolívar in the old city center. Some of Bogotá's striking buildings are located in the area surrounding the square – the classical cathedral, one of South America's largest churches, the newly built Palace of Justice, as well as the palaces Alcaldía de Bogotá and Capitolio Nacional.

Monserrate is nearby, a 3,152-meter-high (10,341 feet) mountain. You can walk up the mountain or use the convenient options of going by car or funicular. From Monserrate, you have a breathtaking view of the city. You can also visit the Shrine of the Fallen Christ, a religious artifact that attracts thousands of Catholic pilgrims every year.

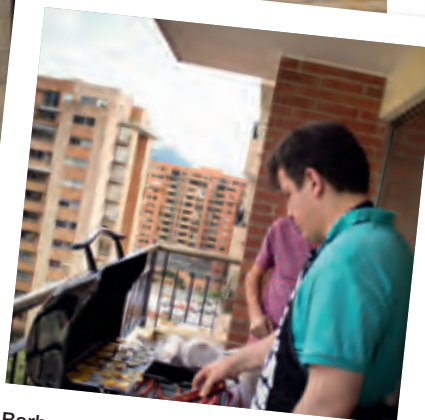
I also recommend you visit one of the city's nearly 60 museums, for example the Museo del Oro del Banco de la República Colombia, known as the Gold Museum for short. It was founded in 1938 to preserve the country's archeological heritage and houses the world's largest collection of gold objects from pre-Columbian times. Even viewing the city's architecture counts as a museum visit, and it doesn't cost a penny. The variety of architectural styles will give you insight into Bogotá's checkered history. Many buildings from colonial times



Coffee is one of the main crops grown around Bogotá.



Voith Turbo Colombia was founded in 2008 and today employs 25 staff.



Barbecues are an important part of Colombian culture – and Felipe Muriel Arevalo’s family is no exception.

have undergone costly restorations to preserve the traditional Spanish-Andalusian style; equal importance is attached to preserving unusual churches and the buildings from the Republican period. Directly adjacent to the traditional old city quarters, the “barrios,” you can now find many modern buildings that have transformed Bogotá into a city of contrasts.

But back to those important breaks. Hungry yet? Then it’s time for a restaurant that offers some of Bogotá’s local specialties. For example, you can try the traditional Ajiaco, a hearty soup of chicken, potatoes and corn, served with rice and avocado. Then follow it with Santaferense-style hot chocolate – you dunk buttered bread and cream cheese into your cup. The best way to enjoy this drink is in the evening on a terrace when the city lights are illuminated and music drifts up out of the city’s many open doors. //

Our location

Voith Turbo Colombia was established in 2008 and I have worked there as Chief Financial Officer since 2013. We currently have 25 members of staff and work mainly in the transport and industrial sectors with a focus on sales and service. Our customers include the operator of the express bus network in the country’s main cities. We are also provide regular servicing for a fleet of overland buses and trucks, and supply and service hydrodynamic and variable-speed couplings for mining companies.



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