Global **Faces**

Annual report 2011

ANDRITZ

CONTENTS

BUSINESS AREAS

HYDRO	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	2,096.2	1,870.1	1,693.9	1,543.4	1,216.1
Order backlog (as of end of period)	MEUR	3,671.4	3,376.0	2,894.5	2,590.1	1,954.9
Sales	MEUR	1,772.9	1,579.2	1,378.0	1,205.9	910.0
EBITDA	MEUR	174.3	139.9	120.9	105.7	66.3
EBITDA margin	%	9.8%	8.9%	8.8%	8.8%	7.3%
EBITA	MEUR	147.7	118.0	100.5	87.9	52.2
EBITA margin	%	8.3%	7.5%	7.3%	7.3%	5.7%
Capital expenditure	MEUR	44.3	41.5	44.5	35.0	25.4
Employees (as of end of period; without apprentices)	-	7,285	6,530	5,993	5,606	4,390

PULP & PAPER	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	2,664.3	1,388.4	923.0	1,033.8	1,406.4
Order backlog (as of end of period)	MEUR	2,221.6	1,099.6	778.7	752.8	1,060.4
Sales	MEUR	1,855.9	1,105.3	903.3	1,326.6	1,462.2
EBITDA	MEUR	136.6	98.4	42.0	84.5	105.3
EBITDA margin	%	7.4%	8.9%	4.6%	6.4%	7.2%
EBITA	MEUR	118.9	80.7	17.5	66.3	87.8
EBITA margin	%	6.4%	7.3%	1.9%	5.0%	6.0%
Capital expenditure	MEUR	19.5	16.4	14.9	20.2	21.8
Employees (as of end of period; without apprentices)	-	5,984	4,851	4,239	5,102	4,843

SEPARATION	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	468.6	424.3	305.4	361.2	346.9
Order backlog (as of end of period)	MEUR	259.2	242.3	139.6	151.8	161.1
Sales	MEUR	448.9	375.4	322.6	366.6	364.4
EBITDA	MEUR	44.2	34.8	29.3	32.1	30.8
EBITDA margin	%	9.8%	9.3%	9.1%	8.8%	8.5%
EBITA	MEUR	38.2	29.5	24.6	27.3	25.7
EBITA margin	%	8.5%	7.9%	7.6%	7.4%	7.1%
Capital expenditure	MEUR	7.0	5.7	5.7	7.4	4.9
Employees (as of end of period; without apprentices)	-	1,976	1,816	1,329	1,437	1,349

METALS	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	318.6	302.7	296.2	611.5	636.4
Order backlog (as of end of period)	MEUR	465.1	521.0	564.1	736.2	631.5
Sales	MEUR	372.7	340.2	473.4	566.2	408.0
EBITDA	MEUR	21.5	21.2	23.2	42.6	33.1
EBITDA margin	%	5.8%	6.2%	4.9%	7.5%	8.1%
EBITA	MEUR	19.4	18.4	20.5	40.1	30.6
EBITA margin	%	5.2%	5.4%	4.3%	7.1%	7.5%
Capital expenditure	MEUR	1.8	1.9	2.0	4.3	3.2
Employees (as of end of period; without apprentices)	-	945	937	971	996	880

FEED & BIOFUEL	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	159.2	146.4	130.8	155.4	143.7
Order backlog (as of end of period)	MEUR	65.8	52.0	57.6	46.5	35.3
Sales	MEUR	145.6	153.7	120.2	144.5	137.8
EBITDA	MEUR	9.6	13.0	2.8	13.3	15.2
EBITDA margin	%	6.6%	8.5%	2.3%	9.2%	11.0%
EBITA	MEUR	7.3	11.0	1.0	11.6	13.4
EBITA margin	%	5.0%	7.2%	0.8%	8.0%	9.7%
Capital expenditure	MEUR	4.4	1.8	3.4	2.9	1.7
Employees (as of end of period; without apprentices)	-	560	522	517	566	553

Important key financial figures

ANDRITZ GROUP

(According to IFRS)	Unit	2011	2010	2009	2008	2007
Order intake	MEUR	5,706.9	4,131.9	3,349.3	3,705.3	3,749.5
Order backlog (as of end of period)	MEUR	6,683.1	5,290.9	4,434.5	4,277.4	3,843.3
Sales	MEUR	4,596.0	3,553.8	3,197.5	3,609.8	3,282.5
EBITDA[1]	MEUR	386.2	307.3	218.2	278.2	250.7
EBITDA margin	%	8.4	8.6	6.8	7.7	7.6
EBITA[2]	MEUR	331.5	257.6	164.1	233.2	209.7
EBITA margin	%	7.2	7.2	5.1	6.5	6.4
Earnings Before Interest and Taxes (EBIT)	MEUR	312.7	245.5	147.1	218.5	200.9
EBIT margin	%	6.8	6.9	4.6	6.1	6.1
Earnings Before Taxes (EBT)	MEUR	321.7	247.9	149.6	210.5	200.8
Net income (including non-controlling interests)	MEUR	231.5	177.0	102.9	147.0	137.8
Fixed assets	MEUR	1,151.8	858.9	731.4	732.1	632.3
Current assets	MEUR	3,414.8	3,176.9	2,577.9	2,354.2	1,877.1
Shareholders' equity[3]	MEUR	938.9	794.4	663.5	577.4	481.6
Provisions	MEUR	667.3	582.8	529.9	477.3	402.4
Liabilities	MEUR	2,960.4	2,658.6	2,115.9	2,031.6	1,625.4
Total assets	MEUR	4,566.6	4,035.8	3,309.3	3,086.3	2,509.4
Equity ratio[4]	%	20.6	19.7	20.0	18.7	19.2
Liquid funds[5]	MEUR	1,814.5	1,594.7	1,082.1	821.8	598.8
Net liquidity[6]	MEUR	1,400.6	1,177.0	677.9	408.9	246.5
Cash flow from operating activities	MEUR	433.8	704.5	345.7	255.0	33.1
Capital expenditure[7]	MEUR	77.0	68.8	70.5	69.7	57.0
Employees (as of end of period; without apprentices)	-	16,750	14,655	13,049	13,707	12,016

1) Earnings Before Interest, Taxes, Depreciation, and Amortization 2) Earnings Before Interest, Taxes, Amortization of identifiable assets acquired in a business combination and recognized separately from goodwill at the amount of 17,839 TEUR (2010: 12,158 TEUR), and impairment of goodwill at the amount of 1,000 TEUR (2010: 0 TEUR) 3) Total shareholders' equity including non-controlling interests 4) Shareholders' equity/total assets 5) Cash and cash equivalents plus marketable securities plus loans against borrowers' notes 6) Liquid funds plus fair value of interest rate swaps minus financial liabilities 7) Additions to intangible assets and property, plant, and equipment

Further data, facts, and figures
on the 2011 business year are available in the online annual financial report at **reports.andritz.com/2011/** – or e-mail us at **investors@andritz.com** to request a printed copy free of charge.

Global **faces**

International technology Group ANDRITZ has many faces. In figures, there are more than 16,500 employees all over the world, making their own personal contribution to the success of ANDRITZ, day after day. While some develop visions and strategies for a prosperous future of our company, others are researching new technologies in the labs so that we can offer our customers the best possible solutions. There are long-serving skilled workers who machine our products manually, millimeter by millimeter, and pass on their experience to young apprentices at the same time. And there are engineers designing new plants on computers, while their children play in the ANDRITZ kindergarten – young people who perhaps will also become ANDRITZ engineers one day. The employees introduced in this annual report represent the “global faces” of ANDRITZ that have contributed to the success of the 2011 business year.


1811 - 1868
MASCHI

The first face of ANDRITZ

Today's ANDRITZ AG originated from the "Eisengießerei und Maschinenfabrik J. Körösi", an iron foundry and engineering works established by Hungarian born Josef Körösi in Andritz, a suburb of the city of Graz, Austria, in 1852. Soon after the company was established, the production program included cranes, pumps, and water turbines, which were followed by bridges, steam boilers, and steam engines, as well as mining equipment.

One hundred sixty years later, ANDRITZ is an international and stock exchange-listed technology Group with more than 16,500 employees and over 180 production sites, service, and sales companies all around the world. Today's ANDRITZ GROUP headquarters is located on the site of the former Körösi works. With its five business areas, ANDRITZ is one of the leading global suppliers of plants, equipment, and services to the markets it serves. ›

ANDRITZ today

ANDRITZ HYDRO

supplies electromechanical equipment for hydropower plants. With over 170 years cumulated experience and more than 30,000 turbines installed totaling approximately 400,000 MW output, the business area is a global market leader in the area for hydraulic power generation, offering the complete product portfolio including turbines, generators, and additional equipment of all types and sizes: “from water to wire” for small-scale hydropower stations up to outputs of more than 800 MW. ANDRITZ HYDRO also holds a top position in the growing service, refurbishment, and upgrade market for existing hydropower plants.

ANDRITZ PULP & PAPER

is a leading global supplier of machinery and systems for the production and processing of all types of pulp, paper, tissue, and board. The technologies include processing of logs and annual fibers, production of chemical, mechanical, and recycled pulps, recovery and reuse of chemicals, preparation of paper machine furnish, production of paper, tissue, and board, paper finishing and coating, as well as the treatment of reject materials and sludge. In addition, the business area offers a broad range of biomass and recovery boilers for energy generation.

ANDRITZ SEPARATION*

is one of the leading global suppliers of plants and equipment for mechanical solid/liquid separation of municipal and industrial sludges, for suspensions in many different industries (coal, ore, and mineral processing, chemical, petrochemical, and food industries) and for biomass (wood, bagasse, paper, fiber and deinking sludges, rejects), as well as for the subsequent thermal drying of these products. The business area’s field of activity covers the design and manufacture of key components and turnkey plants (thickeners and screens for wastewater treatment, centrifuges, drum and disc filters, belt and filter presses for dewatering, as well as drying plants and systems for thermal utilization of sludge), the erection and start-up of complete plants, the entire automation and safety technology, as well as the after-sales service.

* The ENVIRONMENT & PROCESS business area was renamed SEPARATION as of October 1, 2011.

ANDRITZ METALS

is one of the leading global suppliers of complete lines for the production and further processing of cold-rolled carbon steel, stainless steel, and non-ferrous metal strip. These lines consist of equipment for cold rolling, heat treatment, surface finishing, strip coating and finishing, punching and deep drawing, and for regeneration of pickling acids. The business area also supplies turnkey industrial furnace systems for thermal processes, such as heat treatment of slabs and forged pieces, as well as refining furnaces for the copper industry.

ANDRITZ FEED & BIOFUEL

supplies plants, equipment, and services for the production of animal feed pellets (for the pet food, fish and shrimp feed industries) and biomass pellets (wood pelleting and pelleting of agricultural and industrial by-products, such as straw). The business area is one of the world market leaders in both fields.

In addition, ANDRITZ offers technologies for certain other sectors including automation, pumps, systems for the production of nonwovens and plastic films, steam boiler, biomass boiler and gasification plants for energy generation, flue gas cleaning plants, systems for the production of panelboards (MDF), turbogenerators, and biomass torrefaction equipment.

»Success has many faces«

Wolfgang Leitner on . . .
. . . the 2011 business year
The ANDRITZ employees can be very satisfied with the 2011 business year. Thanks to some exceptionally large single orders in the hydropower and pulp areas, the order intake reached an all-time high for the company of more than 5.5 billion Euros. Compared to the previous year, we also succeeded in substantially increasing all other key financial figures, such as order backlog, sales, and earnings. Thus, in 2011 we have once again achieved our goal of securing profitable growth in the long-term.

. . . the reasons for success
From a long-term point of view, the fact is that we have developed systematically over the past 30 years to become an independent and globally active supplier of complete systems for our customers. With a well-balanced mix of company acquisitions and organic growth, driven primarily by our own research and development, we rank among the top three suppliers worldwide in each of our business areas. In the renewable energies sector, which is growing rapidly worldwide, we have made use of the growth opportunities in this market segment by expanding our product range and have substantially strengthened and extended our market position. Due to our worldwide presence, we were able to participate in the economic boom in the emerging markets and, therefore, more than compensate for the comparatively moderate growth in Europe and North America. We now have more than 30 percent of our staff in the emerging markets. On behalf of the Executive Board, I would like to thank all of our employees, who are the true pioneers of this success, for their commitment in the past business year.

. . . what makes a good employee
What counts for me is an employee's track record, his or her lifetime achievements in the form of concrete results. Whether or not an employee can sell himself well is not a decisive factor – at least not within the company.

. . . the ANDRITZ acquisition policy
We concentrate very much on identifying what makes up the substance of a company and, therefore, also on the employees' achievements. We are constantly searching for opportunities to acquire companies that complement or extend our existing portfolio of products and services so that we can become a full-line supplier with leading technologies. 2011 was a good year in this respect. In the nonwovens segment, a market with good growth potential, we acquired the nonwovens division of the French NSC Group, now ANDRITZ Asselin-Thibeau. In combination with the products and services of ANDRITZ Küsters and ANDRITZ Perfojet, we can now offer our customers full-line system solutions for the production of nonwovens. With this acquisition, we have reached a necessary critical

Wolfgang Leitner
Wolfgang Leitner is President and CEO, as well as the largest single shareholder of ANDRITZ through the Custos private foundation, which owns just under 30% of the shares. Born in Graz, Austria, in 1953, the chemistry graduate began his career as a research chemist and set up a pharmaceutical company. He started working for ANDRITZ, the company where his father had worked as a machine fitter for 30 years, as a management consultant in 1983. In 1987, he was appointed CFO at ANDRITZ; at that time, the company had sales of around 194 MEUR and profits of just under 1 MEUR. Wolfgang Leitner was appointed President and CEO of ANDRITZ in 1994.


»Generate sustainable growth with a competent and motivated team.«
Wolfgang Leitner, President and CEO of ANDRITZ

"What counts for me is an employee's lifetime achievement in the form of concrete results." Wolfgang Leitner in conversation with Anna Senarclens de Grancy, design engineer for pumps.

sales volume of more than 100 million Euros in the nonwovens sector as well. The acquisition of Iggesund Tools has strengthened our range of technologically sophisticated wear parts for the pulp industry. And the integration of Austrian Energy & Environment, acquired at the end of 2010, is proceeding according to plan. ANDRITZ Energy & Environment, as the company is now named, fits into our Group very well. The company has excellent employees and products. The fluidized bed boilers of AE&E complement our existing product range by boiler plants for higher capacities and for energy generation from residual and waste materials. As a result, we are well-prepared to successfully participate in the rapidly growing global market for fluidized bed boilers for power generation. The employees of companies we have acquired keep telling us they are happy to have become a part of the ANDRITZ GROUP. This certainly has to do with the fact that we only acquire companies that fit well with our own. We make every effort to ensure that these companies take on clearly defined tasks as part of the Group and continue to grow sustainably.

... global or local

Our goal is to extend our strong market position in Europe and North America and make use of the opportunities in the growth markets of South America and Asia. We are well-positioned with a good geographical balance and act both globally and locally. ANDRITZ supplies to globally acting companies all over the world. We are present at more than 180 locations worldwide, thus close to our customers in order to meet their requirements promptly. In 2011, we substantially strengthened this regional presence mainly by acquisitions. However, the service presence is still to be extended in order to help our customers in the best way to achieve their goals in terms of productivity, profitability, and sustainability.

... the future of ANDRITZ

In the long-term, we intend to continue to grow sales by ten percent on average annually. However, given the extraordinary high order intake in 2011 and the unchanged difficult economic environment, ANDRITZ growth may be more moderate in 2013 and 2014 than it has been recently. In terms of profitability, we confirm our goal of achieving an EBITA margin of seven percent over the economic cycle. Each of our business areas has its own clear strategy for promoting growth. Also in the future, one focus of this growth strategy will be the emerging markets – particularly China, Brazil, and India. In terms of the Group's management, we are also well-prepared for the future. The average age of the Executive Board members is 53 years. On average, the five members have been employed by ANDRITZ for 20 years. The second management level also comprises a well-balanced mix of long-serving and younger colleagues.

... his personal future

What drives me today is the goal of building something sustainable together with a good team by creating satisfied customers.

At eye level: Mario Kreuzer, manufacturing worker at ANDRITZ, with Wolfgang Leitner.

»When I grow up, I'm going to be a ballerina!«

Sophie Gotthard (3rd from right)
attends the ANDRITZ kindergarten

Ballerina or engineer

Sophie Gotthard is five years old. She attends dance classes and proudly announced to her parents, "When I grow up, I'm going to be a ballerina!" While Sophie's parents, Chinese-born Haiping Gotthard and Austrian Erich Gotthard, are working for ANDRITZ as automation engineers, Sophie plays in the ANDRITZ kindergarten. Perhaps she will rethink her career as a ballerina some day and join ANDRITZ as an engineer instead . . .

At the ANDRITZ kindergarten in Graz, time doesn't quite have the same meaning as in other childcare facilities. The doors open at 6:30 a.m., and the children are taken care of until 6:30 p.m. "My current job wouldn't be possible if there wasn't a company kindergarten," says Haiping Gotthard. "And the vacation breaks are also geared towards family and career. The kindergarten only closes in the month of August for three weeks."

After Haiping Gotthard takes young Sophie to the ANDRITZ kindergarten, the 38-year-old engineer is busy providing technical support for the ANDRITZ engineering staff. "When I returned to work after being on maternity leave, I started in a new position where I have very little business travel. Thankfully, my boss showed the best possible consideration for my roles as both engineer and mother."

Two offices down, Haiping's husband Erich (43) works on automation solutions. He spends two to three months a year traveling abroad on business. Today, he is working in the Graz office on the automation system for the 16th tissue machine ordered from ANDRITZ by the Chinese Hengan Group. Haiping and Erich Gotthard first met during the start-up of the very first tissue machine ordered by Hengan: "In 1998, I was on the Hengan site in Hunan Province," Erich Gotthard says. "Haiping was working there as an automation engineer from ABB China, and I was there as an automation engineer from ANDRITZ. We met, got to know one another – and then there was a second site," Erich Gotthard smiles. The second site: an order from Asia

Haiping Gotthard

Born in Xinjiang in Northwestern China on the Russian border, Haiping Gotthard attended elementary school and high school in Shanghai and Beijing. At the University of Tianjin, one of the main ports in Northeastern China, she graduated in electrical engineering and industrial automation at the age of 22. "In China, you have to decide what line of study you want to take after six years at elementary school and three years at high school. My grades in math and physics were better than in other classes. So I became an engineer, just like my parents."

Sophie with parents Haiping and Erich Gotthard. Haiping Gotthard on combining family and career at ANDRITZ: “Best possible consideration for my roles as both engineer and mother.”

Pulp & Paper near Shanghai, and once again, they were both working on the same machine. After this job, Haiping moved to Austria, then came the wedding in 1999, and she began working for ANDRITZ AUTOMATION in the engineering department in 2000. Six years later, Sophie was born. “Seven, eight, six,” says the engineer, Erich Gotthard. He means July 8, 2006. Sophie began attending the ANDRITZ kindergarten shortly after her first birthday. The kindergarten is multicultural – the parents of this year’s group come from eight different nations. The 32 children get to know each other’s cultures while playing together. English is taught twice a week. And while the children are playing, they might also develop an interest in engineering: The children here don’t just play with Lego and Playmobil; they also have the opportunity to make things on a large workbench.

Sophie will make her own way, too . . . whether she becomes a ballerina or an engineer.

Erich Gotthard

After finishing his compulsory schooling in Graz, where he was born, Erich Gotthard completed a course in electrical engineering at Technical College there. In 1988, he began his professional career at ANDRITZ, where he worked on automation solutions for many different products – for hydropower plants as well as for pulp, paper, board, and tissue machines, for pickling lines or sewage sludge dryers. “I became an engineer because I’ve been interested in working with tools ever since I was a child. And, because my father was a railroad engineer. This opened up the world of engineering to me at an early age.”

»If you want to succeed in a foreign country, you must immerse yourself in its culture. Even if you do not master the language completely, a real understanding of the culture is essential.«

Gary Beckingham, Head of the Fiber Preparation division at ANDRITZ China

加利 白金漢[1]

Gary Beckingham
Gary Beckingham was born in Portsmouth, UK, in 1962 and is married with two daughters. After achieving a "sandwich-degree" in chemical engineering and management economics, he began his professional career as an engineer at a pilot plant for separators in Germany. After numerous stops along the way (job-related, Gary Beckingham has moved his home 18 times), he began establishing the PULP & PAPER Fiber Preparation division in China in 2002, which has an order intake of around 100 MEUR today.

One of the infamous sandstorms and stern-looking immigration officers welcomed Gary Beckingham when he touched down in Beijing ten years ago. "Foreigners were still something of a novelty in China," Gary Beckingham recalls. "Few people spoke English at that time. When I walked down the street, children sometimes stopped and stared and pointed at me, or even ran away yelling."

In those days, the most important start-up capital was Gary Beckingham himself, with his experience as a globetrotter and his expertise in the pulp and paper industry. And a laptop. Nothing else: no staff, no production facilities, no reference projects. Was there really nothing else there? "Oh, yes – pressure to show a positive result quickly!"

But it didn't take Gary Beckingham long to find his feet in China. The Englishman copes easily with the everyday challenges – after all, he has already worked for nine different companies in five different countries, has moved 18 times, has driver's licenses for five countries, and learned five-and-a-half languages: English, Chinese, German, Finnish, French – "And I'm learning Mongolian at the moment. My wife, who is Mongolian, wants me to understand my in-laws . . ."

What were the biggest challenges starting in China? "The language barriers, understanding the cultural differences, the food, driving, finding out how to compete against local Chinese companies, and finding and training staff," he says.

Of course, Beckingham's worldwide network in the pulp and paper industry does help. He has been working in this field since 1984: first of all for an American company in the UK, then for a firm in Germany that acquired the company in the UK, then for a subsidiary of this company in Finland, and then for the next subsidiary in Singapore. When ANDRITZ acquired parts of this group in 2001, Gary Beckingham landed at ANDRITZ.

Within only nine years, Gary Beckingham and his staff led the Fiber Preparation division from virtually zero to 100 MEUR order intake and made it the market leader in China. So one-third of the ANDRITZ order intake in China comes from Beckingham's team.

Why did Gary Beckingham succeed in doing what others had not been able to do in China? "Many foreign companies fail in China because they do not understand the local culture and do not integrate themselves. An example from everyday working life is: No matter how strong confrontations with business part-

[1] 加利 白金漢 – this is how to write Gary Beckingham in Mandarin. The first name 加利 means "Charlie", pronounced "Jia Li", which is the most similar sounding name to "Gary", a first name that is not known in China. The last name 白金漢 (to be spoken "Bai Jin Han") has also been adapted to sound almost like Beckingham: 白 ("Bai") means "white", 金 ("Jin") means "gold", and 漢 ("Han") means the Chinese people. Thus: Charlie, the white-golden Chinese . . .

ANDRITZ China
ANDRITZ has about 1,500 employees in China. Customers profit in particular from ANDRITZ's own manufacturing facility in Foshan, Guangdong Province. In this second largest manufacturing facility of the Group, plant and machines are manufactured that comply with the high European quality standards. ANDRITZ is represented in China with all five business areas at more than ten locations.

ners are, a Chinese person must always be given a way of saving face. If you want to succeed in a foreign country, you must immerse yourself in its culture. Even if you do not master the language completely, a real understanding of the culture is essential." Gary Beckingham has this understanding – also a reason why he received a very rare multicultural award in June 2011. He was made an honorary citizen of Foshan by the city's authorities.

In spite of his success, we must ask: What would you have done differently during your years in China with the knowledge and experience you have today? Gary Beckingham pauses before replying. "Probably nothing at all. I only would have liked to have had more time to learn more Mandarin. My employees often joke with me and say it's good they can speak to each other sometimes without me knowing exactly what they're talking about. To some degree it's correct – but I'm also able to surprise them sometimes with how much I do understand . . ."

Gottfried Schmölzer successfully manages the activities of ANDRITZ in China and says about Gary Beckingham: "He is a fighter. Gary has vision. He battles on until he achieves his goals, meeting any resistance with excellent social and professional competence."

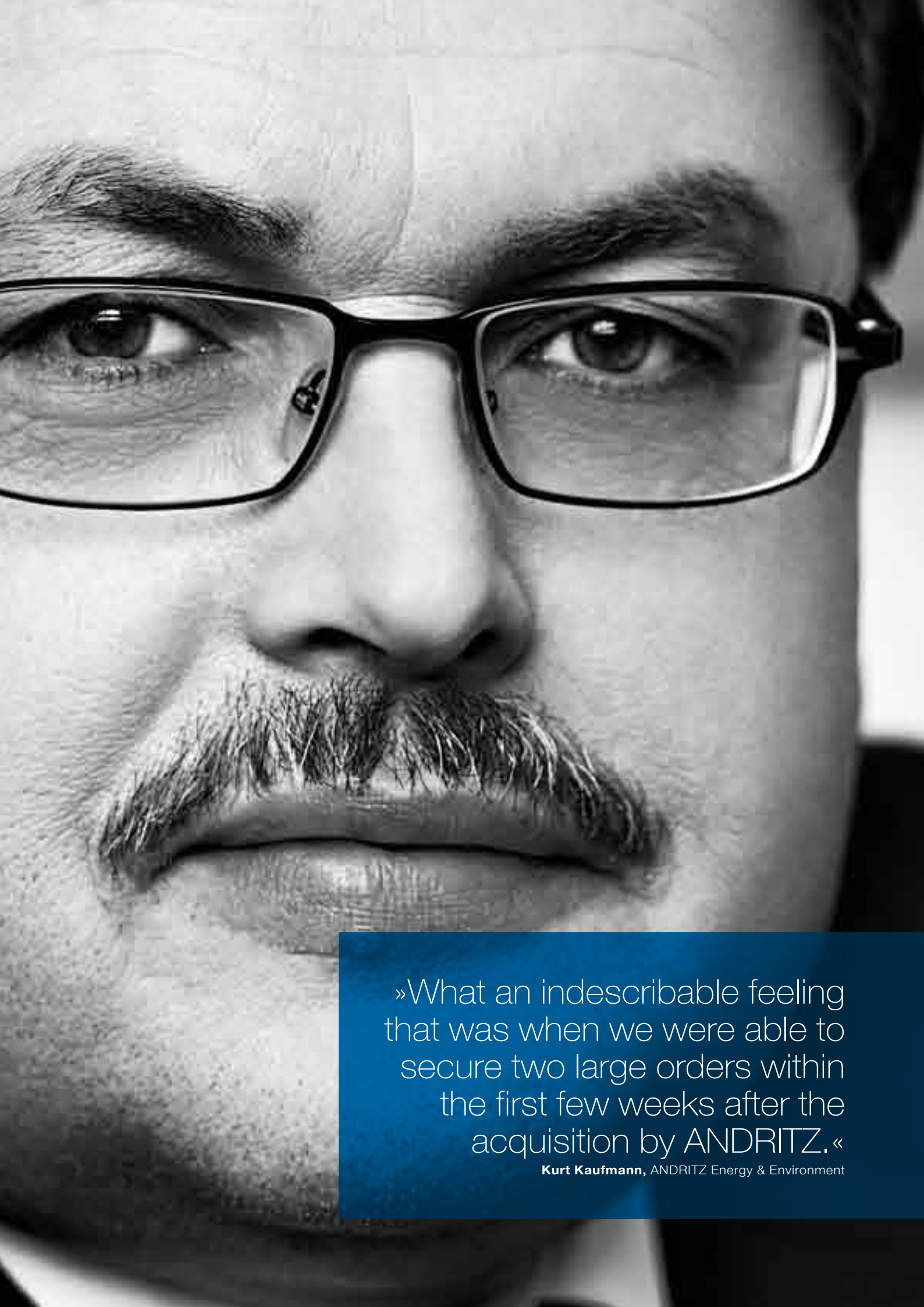
Win-win-win

Following its acquisition by ANDRITZ, Austrian Energy & Environment became ANDRITZ Energy & Environment (AE&E) in January 2011. The company has more than 300 employees, and in its first year as a member of the ANDRITZ GROUP it was able to win several major contracts. AE&E manager Kurt Kaufmann speaks openly about the difficult period during the insolvency of the old AE&E, the changeover to the new AE&E, and the ANDRITZ GROUP.

Kurt Kaufmann
The 47-year-old mechanical engineering graduate has worked for AE&E since 1992. He began his career there as a design engineer, then as project manager and process engineer, and worked his way up to his current position as Senior Vice President of the "Steam generators and plants" department, which is responsible for boiler plants. When Kurt Kaufmann isn't busy with fluidized bed technology, he spends his time in the fresh air with his wife and their twins. "Music active and passive" is also mentioned under hobbies in Kurt Kaufmann's CV. Active – playing the clarinet since the age of seven. Passive – preferably Wolfgang Amadeus Mozart.

Mr. Kaufmann, how did you experience the turbulent times during the insolvency of the old AE&E?
It was undoubtedly the most challenging period in my professional career, marked by efforts to keep current orders alive, stay in the running for important new projects in spite of an uncertain future, and at the same time convince potential buyers of our company's merits. My biggest worry was the future of our employees whose performance was outstanding over the years and who were in no way responsible for the demise of the old AE&E.

What went through your head when you heard that ANDRITZ was interested in acquiring AE&E?
I had no direct connection to ANDRITZ, although I knew about the positive development of the company in recent years from press reports. During the acquisition process, I was in touch with the ANDRITZ M&A and management team and was immediately impressed by their professional approach and expertise. If I had had to select an owner myself, I would have chosen ANDRITZ. And it was the commitment shown by the top management of the new parent company in concluding the new contracts – which were so important immediately after the acquisition – that really



»What an indescribable feeling that was when we were able to secure two large orders within the first few weeks after the acquisition by ANDRITZ.«

Kurt Kaufmann, ANDRITZ Energy & Environment

convinced me. What an indescribable feeling that was when we were able to secure two large orders within the first few weeks after the acquisition.

Viewing the situation one year later, would you say your expectations were confirmed? Or have things turned out quite differently?
My first impressions after the acquisition have been confirmed. I am convinced that we would not have succeeded in regaining a foothold so quickly with any other owner.

How did the AE&E team view the move to ANDRITZ and what do the employees say about it today?
Our team welcomed the opportunity from the very beginning to become part of an international and financially strong industrial group which has its roots in Austria. This is still true today.

What advantages does AE&E have as part of the ANDRITZ GROUP?
Our company has been integrated into the PULP & PAPER business area, providing growth opportunities

Major AE&E orders 2011

January 2011
OTV S.A., France, ordered four steam boilers with bubbling fluidized bed technology for the new thermal sewage sludge treatment plant in Hong Kong, China. This plant will be the largest of its kind worldwide, treating 2,000 t/d of sewage sludge from Hong Kong's wastewater treatment plant in a thermal process to generate electricity.

March 2011
Vitkovice Power Engineering a.s. ordered two circulating fluidized bed boilers, including a flue gas cleaning plant, for the Yunus Emre power station, Turkey.

April 2011
For an order from POSCO Engineering & Construction Co., Ltd., AE&E will supply the first circulating fluidized bed boiler in South Korea to be fired exclusively with biomass for the Donghae biomass power plant.

For the new thermal sewage sludge treatment plant in Hong Kong, the largest of its kind worldwide, AE&E supplies steam boilers with bubbling fluidized bed technology.

for both our capital business and the service sector because we can make use of the global ANDRITZ network, thus gaining better access to the pulp and paper industry.

How in detail do AE&E's technologies fit into the ANDRITZ portfolio?
We complement the existing product and service offerings with our circulating fluidized bed boilers, bubbling fluidized bed technology focused on incineration of residues, sulfite liquor boilers including chemical recovery system, and our soda technology. Our flue gas cleaning systems are a good extension to the portfolio.

What advantages do ANDRITZ and, ultimately, its customers have from AE&E as part of ANDRITZ?
In addition to complementing and extending the portfolio, ANDRITZ can also profit from our many years of experience as a plant engineering company and from our know-how in project management. This is a classic win-win situation for all concerned. And the customers have a reliable and financially strong partner on a global footing and one that is present locally to offer the best possible technologies from a single source. Thus, a win-win-win.

AE&E is very active in research and development. Which fields is it focusing on at the moment?
In addition to continuous further development of our products, we are deeply involved in future-oriented topics that are being pursued primarily as a result of the rising environmental awareness and the increasingly stringent environmental protection laws worldwide. Currently, we are dealing with such topics as increased energy efficiency in combustion of residues, reduced emissions, a low-carbon steam generating process, carbon dioxide capture and lower-cost flue gas desulfurization, or the development of integrated technologies for mercury capture.

September 2011
BASF commissioned AE&E to retrofit the existing flue gas cleaning system in Ludwigshafen, Germany, to improve capture of dioxin, furan, and mercury.

November 2011
E.ON Climate & Renewables UK Biomass Ltd., UK, ordered the equipment for a new biomass power plant near the city of Sheffield as part of an investment project in the renewable energies sector. The scope of supply includes a bubbling fluidized bed boiler plant and the flue gas cleaning system.

November 2011
AE&E will supply a flue gas cleaning plant for the Timisoara combined heat and power plant under an investment project to improve environmental protection in Romania.

»I love large machines and always wanted to work in a mechanical trade ever since I was a child.«

Thomas Puntigam, apprentice at ANDRITZ for three years

»I'm glad to pass on my knowledge and experience to younger colleagues.«

Anton Maier, machinist at ANDRITZ for 40 years

$W = |\vec{F}| \cdot |\vec{s}| \cdot \cos \sphericalangle (\vec{F}, \vec{s})$

In physics, mechanical work is the scalar product of force and distance. If a constant force $\vec{F}$ acts on an object moving in a straight line from point A to point B, the mechanical work done to the object by this force is $W = \vec{F} \cdot \vec{s} = |\vec{F}| \cdot |\vec{s}| \cdot \cos \sphericalangle(\vec{F}, \vec{s})$.

At ANDRITZ, work represents the efforts made by over 6,000 manufacturing employees who use their technical skill and knowledge to manufacture custom-tailored systems and products to meet customers' demands and, therefore, essentially contribute towards the success of ANDRITZ.

Anton Maier is one of the manufacturing staff at ANDRITZ. He grew up in the country in southern Austria – "in a region where there were only a small number of possible careers and apprenticeship vacancies." At a job fair he came across ANDRITZ and began his apprenticeship here. Anton Maier has now worked for 40 of his 55 years as a machinist at the Graz location. Today, he is part of a 30-man team that fits pipes which are needed for hydraulic and pneumatic systems as well as machinery and plant lubrication. In a galvanizing line, these pipes, which are usually made of stainless steel, can be up to four kilometers long. Proudly, he shows photographs of his assignments all over Europe and in the USA, Venezuela, and Indonesia. He has archived hundreds of them and keeps the most impressive ones in photograph albums.

Proudly, he passes on his knowledge and experience to young colleagues. "It's important for the young ones to have an interest in technical work, as well as discipline and ambition. I prefer those young colleagues who have lots of questions and also discuss things that don't turn out so well. In fact, it's the same as it is at home with your own kids."

Speaking of kids: Anton Maier's son also works for ANDRITZ. Markus Maier completed four summer internships here while he was at school. "For his first summer internship he needed a little helping hand

Two generations at ANDRITZ.
Anton Maier with his son, Markus.

from me", the father smiles, "but then he made his own career." And what a career it is. Markus Maier also worked in the manufacturing shop while working on his degree in industrial and mechanical engineering. His diploma is entitled "Manufacturing strategies in a technology group." He was offered a job in the research department of a large German car manufacturer, but decided to join ANDRITZ instead. Today, 30-year-old Markus Maier works in the global manufacturing coordination department.

Now Anton Maier has no more time to talk about himself. He has to get on with his work. The last question asks what was best about working at ANDRITZ, and he replies without hesitation: "The best thing was that we always had plenty of work and were able to survive the more difficult times."

Thomas Puntigam is one of those young employees who benefit from their older colleagues. Now 19 years of age, he has worked for ANDRITZ since 2008. "A friend told me there were vacancies here for mechanical engineering technicians and that it's a good company." The choice of career was an easy one: "My parents have a farm and I have always enjoyed working with my hands, since I was a child. Especially on the large machines – that's what I love. What is more, at ANDRITZ I have the opportunity to travel abroad."

Just like all apprentices, he has to pass through the rigorous schooling of ANDRITZ's own apprentice workshop. "This is a tough time. Here, you learn accuracy and discipline", although Thomas Puntigam is no stranger to discipline. His greatest hobby is curling, and his list of triumphs is a long one: three times European champion, four times runner-up at European championships, five '3rd places' at European championships, and eleven times Austrian champion. "I have been playing ever since I was first able to hold the ice stock properly. Before important championships, I train five or six times a week for several months."

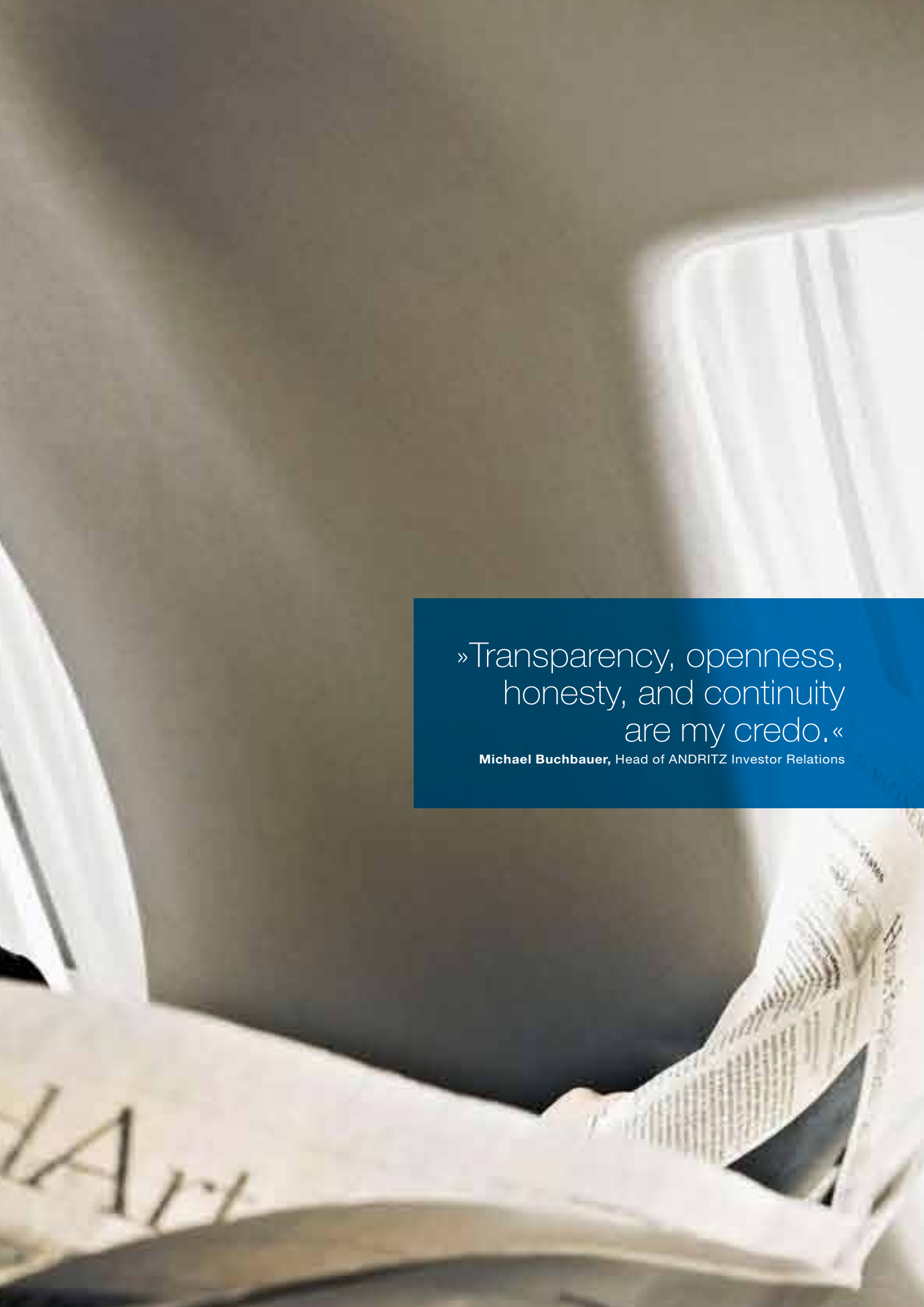
The next generation: young employees
in the apprentice workshop.

During his apprenticeship, Thomas Puntigam spent some time doing practical training abroad at a large Swedish car maker. "It was good to see other manufacturing operations as well. Unlike at ANDRITZ, they work there on assembly lines. I don't really like that."

By the time this annual report is published, he will very probably have passed his final apprenticeship exam and be working in the turbine and large pumps department. After all, he loves large machines . . .

The ANDRITZ apprentice workshop

ANDRITZ has been running its own apprentice workshop in Graz since 1922. There are currently 88 apprentices here at the workbenches, and an average of 30 young employees is taken on every year. What skills does an ANDRITZ apprentice need? "Motivation and enjoyment, willingness to learn, a certain amount of discipline, and technical knowledge," says the 28-year-old trainer, Helmut Schmer. "Many young people try to complete their senior high school education – and only switch to an apprenticeship when they fail at school." Helmut Schmer himself has proved that this is not necessary. He was the first apprentice at ANDRITZ to complete both while training to become an industrial technician: apprenticeship and graduating from school. The apprentice workshop develops and challenges the apprentices with vocational training to deepen their knowledge, with English courses to take on assignments abroad, or with team-building training. During their training, the young workers pass through all of the manufacturing departments. "So that they get to know all the activities involved and can decide more easily which area they finally want to work in."



»Transparency, openness, honesty, and continuity are my credo.«

Michael Buchbauer, Head of ANDRITZ Investor Relations

»Why did other investments increase?«

Chicago, 4:30 a.m. – I wake up early because of the time shift. The night was short, I think to myself. I only touched down at 10:30 the evening before, coming on a flight from New York. I switch on my laptop – the list of new e-mails is long because Austria is seven hours ahead of me. Many e-mails have to be answered before starting the working day. Among those inquiries from ANDRITZ shareholders – mails from institutional investors in the UK and Germany, who have top priority. "Why did other investments in the balance sheet increase so strongly?" is the question being asked. Give a concise answer. That's what UK investors prefer.

Time is short – my first meeting is scheduled for 6:30 in the morning. This time, it's an investor who doesn't know ANDRITZ, but has heard many positive things about us. My job is to convince him and answer his questions, which can range from balance sheet details to general market trends, fully and openly.

Another seven meetings will follow today every hour. Demanding and stressful, but when it comes down to it, I like this Investor Relations job and approach every day with great enthusiasm. As an unknown company, we IPO'd with a market capitalization of around 270 million Euros in 2001, and today we have over three billion Euros – one of the top values in the ATX, the leading share index of the Vienna Stock Exchange. From the IPO till the end of 2011, our share price increased by more than 1,100% – thus, not only significantly outperforming the ATX, but also the share prices of international peer companies.

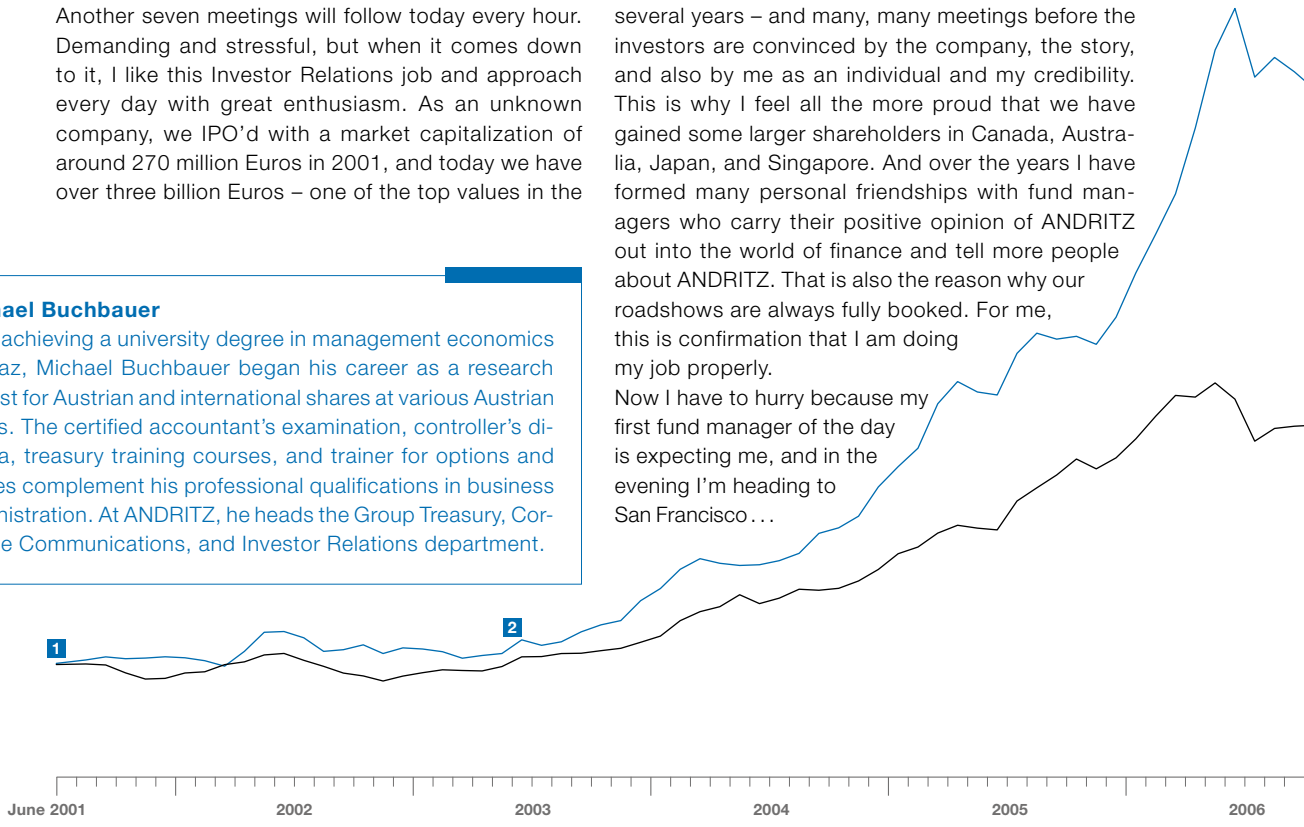
What is the reason for this? Apart from ANDRITZ's successful business development, a clear commitment to the capital market is an absolute must. Transparency, openness, honesty, and continuity in providing information are the fundamental parameters for succeeding in the world of finance – goals to which ANDRITZ has always been committed and with which I can fully identify. Inform in good times and in bad. Always be at the ready for meetings and telephone calls; also, be prepared if the news is not good and discussions with shareholders may become heated.

Another thing that is important to me is to extend the shareholder structure geographically. This often requires a long period of preparation – sometimes several years – and many, many meetings before the investors are convinced by the company, the story, and also by me as an individual and my credibility. This is why I feel all the more proud that we have gained some larger shareholders in Canada, Australia, Japan, and Singapore. And over the years I have formed many personal friendships with fund managers who carry their positive opinion of ANDRITZ out into the world of finance and tell more people about ANDRITZ. That is also the reason why our roadshows are always fully booked. For me, this is confirmation that I am doing my job properly.

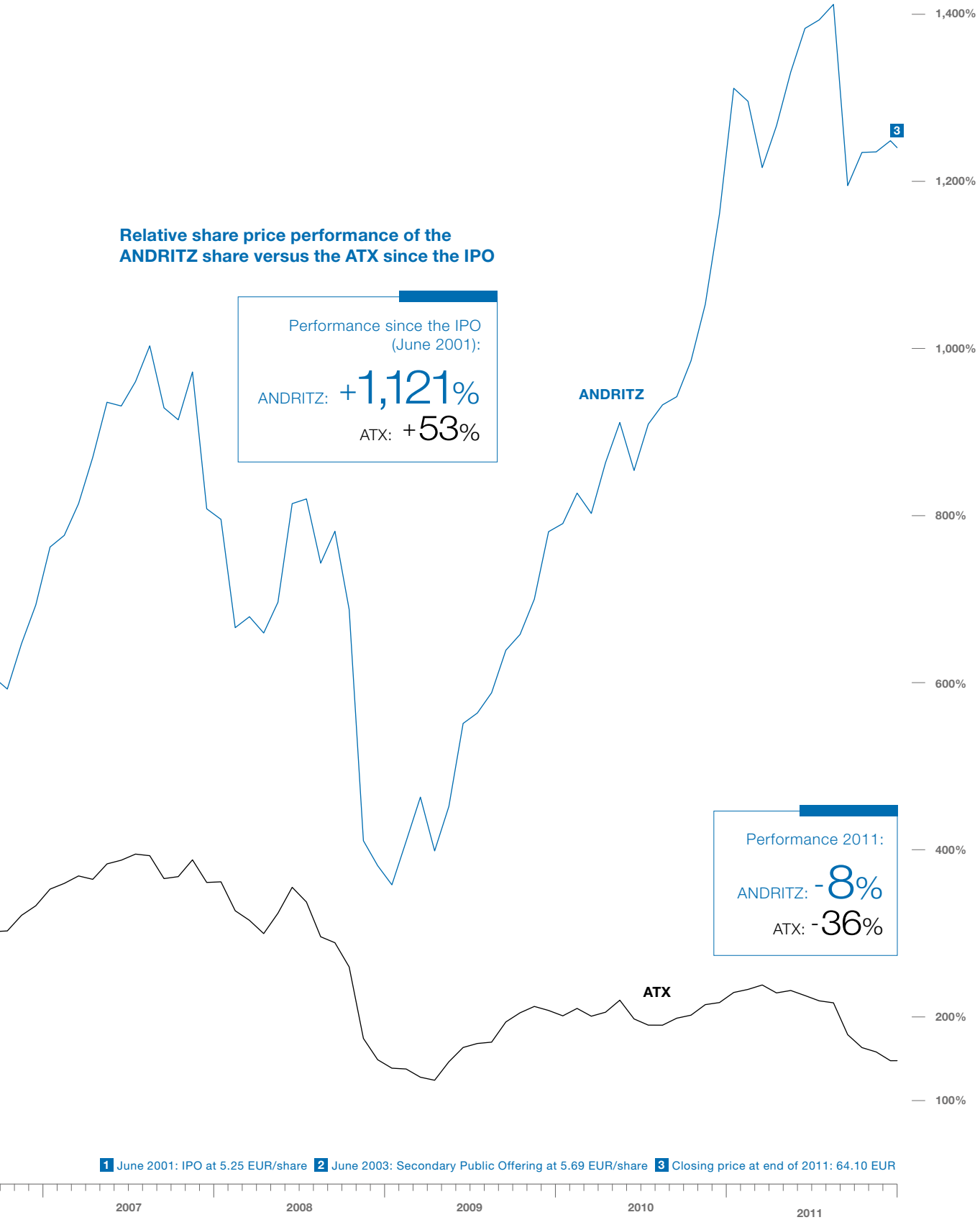
Now I have to hurry because my first fund manager of the day is expecting me, and in the evening I'm heading to San Francisco . . .

Michael Buchbauer

After achieving a university degree in management economics in Graz, Michael Buchbauer began his career as a research analyst for Austrian and international shares at various Austrian banks. The certified accountant's examination, controller's diploma, treasury training courses, and trainer for options and futures complement his professional qualifications in business administration. At ANDRITZ, he heads the Group Treasury, Corporate Communications, and Investor Relations department.



Relative share price performance of the ANDRITZ share versus the ATX since the IPO



1 June 2001: IPO at 5.25 EUR/share 2 June 2003: Secondary Public Offering at 5.69 EUR/share 3 Closing price at end of 2011: 64.10 EUR

Solid performance

Share price development

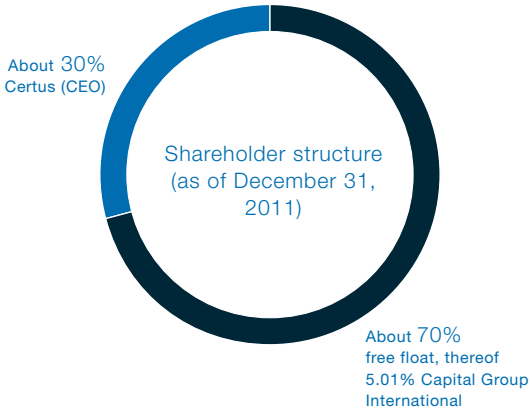
The development on international financial markets was negatively impacted by the prevailing Euro crisis and global economic slowdown in 2011. Within a very weak and volatile stock exchange environment, the price of the ANDRITZ share fell by 7.6% during the reporting period. However, this decline was significantly less than the drop of the ATX, the leading share index of the Vienna Stock Exchange, which fell by 35.9% during the same period. In 2011, the highest closing price of the ANDRITZ share was 75.50 EUR (July 13), while the lowest was 54.82 EUR (August 8).

Solid trading volume

The average daily trading volume of the ANDRITZ share (double count, as published by the Vienna Stock Exchange) was 284,069 shares in the reporting period (2010: 230,773 shares). The highest daily trading volume was noted on August 9, 2011 (1,241,280 shares); the lowest trading volume on December 27, 2011 (19,820 shares).

Stable and well-balanced shareholder structure

ANDRITZ has a very stable and well-balanced shareholder structure. Slightly less than 30% of the shares are owned by Certus Beteiligungs-GmbH, whose Managing Director is Wolfgang Leitner, President and CEO of ANDRITZ AG. With about 70% free float, ANDRITZ has a widely diversified shareholder structure consisting of institutional investors and retail shareholders. The majority of institutional investors come from the Anglo-Saxon countries (particularly UK and USA), but also from Austria and Germany. Retail investors are mainly based in Austria and Germany.



High level of interest by investors worldwide

In 2011, around 300 one-on-one meetings with institutional investors and financial analysts were held during international investor conferences and meetings with various investor groups worldwide, for example in Amsterdam, Austin, Boston, Chicago, Denver, Edinburgh, Frankfurt, Kitzbühel, London, Lugano, Milan, Munich, New York, Paris, San Diego, San Francisco, Tokyo, Toronto, Zurich, and Zürs. In order to expand the regional distribution of the shareholder structure, new investors in Australia and Singapore were targeted in particular.

For private shareholders, ANDRITZ gave presentations at the roadshow of the Vienna Stock Exchange and Hypo Oberösterreich bank in Linz, and the “Börseexpress roadshow” in Graz. In addition, guided

Financial calendar 2012

March 1, 2012
Results for the 2011 business year

March 22, 2012
Annual General Meeting

March 26, 2012
Ex-dividend

The financial calendar with updates, as well as information on the ANDRITZ share, can be found on the Investor Relations page at the ANDRITZ website: www.andritz.com/share

workshop visits were arranged for investment clubs. At the ANDRITZ Capital Market Days in Salzburg, attended by more than 20 international and Austrian analysts and fund managers, the Executive Board provided information on current developments and expectations for the business areas, as well as the goals of the ANDRITZ GROUP in the medium to long-term.

Awards for Investor Relations

The ANDRITZ annual report once again received international awards: At the ARC Awards in New York – the world's premier and largest annual report competition – the 2010 annual report took first place with a "Gold Award". At the Galaxy Awards, an international corporate communication and marketing prize, the annual report came in second in the category of best annual report in the industry sector.

For the third time, ANDRITZ took first place in the main category of the Vienna Stock Exchange award. The "ATX Prize" is awarded to companies in the leading index of the Vienna Stock Exchange for excellent information policy and Investor Relations activities in the Austrian capital market.

Since the Initial Public Offering in 2001, the ANDRITZ GROUP has received several national and international awards for its Investor Relations activities, e.g. for special achievements in Corporate Governance, online Investor Relations, and "Best European Investor Relations" for the "Engineering and Machinery" market.

Broad international coverage

Baader Bank, Banc of America Merrill Lynch, and Commerzbank initiated coverage of ANDRITZ during the reporting period. Thus, the following international banks and investment houses were publishing research reports on ANDRITZ on a regular basis as of the end of 2011: Baader Bank, Banc of America Merrill Lynch, Berenberg Bank, Commerzbank, Crédit Agricole Cheuvreux, Deutsche Bank, Erste Bank, Goldman Sachs, Hauck & Aufhäuser, HSBC Trinkaus, J.P. Morgan, Raiffeisen Centrobank, and UBS.

ANDRITZ complies with the rules of the Austrian Corporate Governance Code. The Corporate Governance report and all other related information are contained in the annual financial report 2011 and can also be found at www.andritz.com.

Key figures of the ANDRITZ share	Unit	2011	2010	2009	2008	2007
Earnings per share	EUR	4.49	3.48	1.89	2.73	2.61
Dividend per share	EUR	2.20[1)]	1.70	1.00	1.10	1.00
Payout ratio	%	49.0	48.9	52.9	40.3	38.3
Equity attributable to shareholders per share	EUR	17.49	14.68	12.28	10.59	9.07
Highest closing price	EUR	75.50	68.92	41.94	43.53	54.00
Lowest closing price	EUR	54.82	39.49	17.50	15.96	35.80
Closing price at end of year	EUR	64.10	68.79	40.52	18.16	41.45
Market capitalization (as of end of period)	MEUR	3,333.2	3,577.1	2,107.0	944.3	2,155.6
Performance	%	-7.6	+67.8	+111.0	-54.4	+2.6
ATX weighting (as of end of period)	%	9.2705	7.3211	4.3701	2.9209	2.3950
Average daily number of shares traded [2)]	Share unit	284,069	230,773	307,029	488,638	452,909

[1)] Proposal to the Annual General Meeting. [2)] Double count, as published by the Vienna Stock Exchange. Source: Vienna Stock Exchange

Basic data of the ANDRITZ share	
ISIN code	AT0000730007
First listing day	June 25, 2001
Types of shares	No-par value shares, bearer shares
Total number of shares	52 million
Authorized capital	None
Free float	About 70%
Stock exchange	Vienna (Prime Market)
Ticker symbols	Reuters: ANDR.VI; Bloomberg: ANDR, AV
Stock exchange indices	ATX, ATX five, ATXPrime, WBI

Triple-A

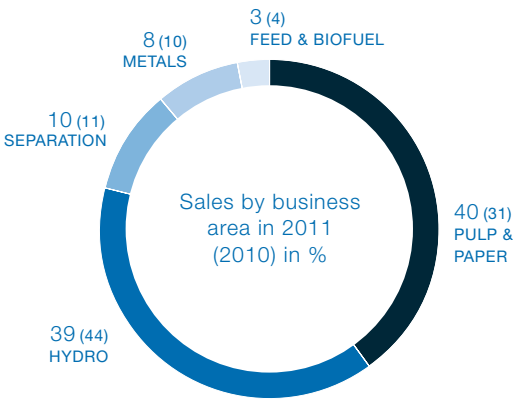
Favorable business development
ANDRITZ closes the 2011 business year with highly satisfactory results. The key business and financial figures were improved substantially compared to the previous year. **A**ll-time high in sales – **A**ll-time high in order intake – **A**cquisition strategy successfully continued: so to speak, a Triple-A.

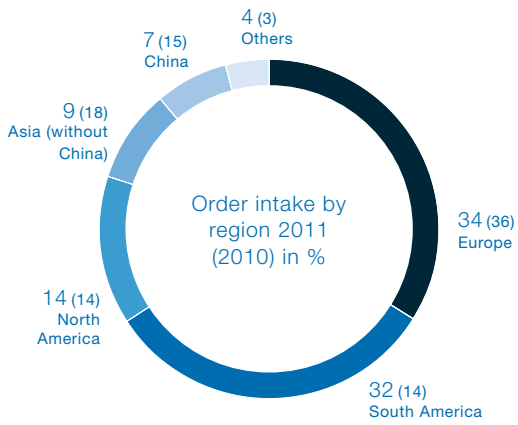
Sales at record level

In 2011, sales of the ANDRITZ GROUP amounted to 4,596.0 EUR, thus 29.3% higher than the reference figure for the previous year (2010: 3,553.8 MEUR). This is mainly attributable to the PULP & PAPER business area, which increased its sales by 67.9% to 1,855.9 MEUR (2010: 1,105.3 MEUR). While the HYDRO, SEPARATION, and METALS business areas also noted a sales increase, sales declined slightly only in the FEED & BIOFUEL business area compared to the previous year.

Order intake: +38%

The order intake of the Group reached an all-time high of 5,706.9 MEUR in the reporting period and increased by 38.1% compared to the previous year (2010: 4,131.9 MEUR). The main reason for this sharp rise was the receipt of three large orders in the PULP & PAPER and HYDRO business areas (technologies and equipment supplied for the two pulp mills Eldorado, Brazil, and Montes del Plata, Uruguay; electromechanical equipment for the Belo Monte hydropower station, Brazil).
Thus, the PULP & PAPER business area was able to almost double its order intake at 2,664.3 MEUR compared to the previous year (2010: 1,388.4 MEUR), and also the HYDRO business area reached a record order intake at 2,096.2 MEUR (2010: 1,870.1 MEUR). The other three business areas also achieved an increase in order intake compared to the previous year.





Order backlog of 6.7 billion EUR

The order backlog of the ANDRITZ GROUP as of December 31, 2011 amounted to 6,683.1 MEUR (December 31, 2010: 5,290.9 MEUR), thus reaching a year-end record figure. With the exception of the METALS business area, the order backlog of all business areas rose compared to the previous year's reference figure.

Solid earnings

The EBITA of the Group developed very satisfactorily in 2011. It amounted to 331.5 MEUR, thus increasing by 28.7% compared to 2010 (257.6 MEUR). The EBITA margin, at 7.2%, was unchanged compared to the reference value of last year (2010: 7.2%).
The net income of the Group excluding non-controlling interests amounted to 230.7 MEUR in the reporting period (2010: 179.6 MEUR).

High liquidity

Liquid funds (cash and cash equivalents plus marketable securities plus loans against borrowers' notes) amounted to 1,814.5 MEUR as of December 31, 2011 (December 31, 2010: 1,594.7 MEUR). The net liquidity (liquid funds plus fair value of interest rate swaps minus financial liabilities) amounted to 1,400.6 MEUR and was thus also significantly higher than at the end of last year (December 31, 2010: 1,177.0 MEUR). This increase is mainly due to advance payments for some major projects.

Capex and cash flow

The investments in tangible and intangible assets amounted to 77.0 MEUR in 2011 (2010: 68.8 MEUR). Capital expenditure focused mainly on workshop modernizations.

The cash flow from operating activities amounted to 433.8 MEUR and was thus significantly below the previous year's reference value (2010: 704.5 MEUR). This decrease was mainly due to project-related changes in working capital.

Important acquisitions

In January 2011, ANDRITZ acquired AE&E Austria GmbH & Co KG, now ANDRITZ Energy & Environment, and thus strengthened and extended the product portfolio in the PULP & PAPER business area. ANDRITZ Energy & Environment specializes in fluidized bed technology for boiler plants and in flue gas cleaning systems.
By acquiring Hemicycle Controls, Canada, the HYDRO business area extended and strengthened its automation business in North America. Hemicycle Controls is an established supplier of automation systems for hydropower plants.
ANDRITZ also acquired Asselin-Thibeau, an affiliate of the French NSC Group. ANDRITZ Asselin-Thibeau delivers systems for the production of dry nonwovens (especially for applications in the textile and hygiene sectors). In combination with the well-proven products and technologies of ANDRITZ Küsters and ANDRITZ Perfojet, the PULP & PAPER business area can now offer its customers complete system solutions for the production of nonwovens.
The PULP & PAPER business area has strengthened and expanded its service portfolio in the wood processing sector by acquiring Iggesund Tools International AB, with headquarters in Iggesund, Sweden. ANDRITZ Iggesund Tools supplies chipping and debarking equipment for pulp and saw mills.

Further data, facts, and figures on the 2011 business year are available in the online financial report at reports.andritz.com/2011/ – or e-mail us at investors@andritz.com to request a printed copy free of charge.

Finding, challenging,

At the end of the 2011 business year, ANDRITZ had more than 16,500 employees. The Group's global presence is reflected in the regional distribution of its staff: About two-thirds are employed in Europe and North America, and around one-third is working in the emerging countries of Asia, Eastern Europe, and South America, particularly China, Brazil, and India.

ANDRITZ offers its employees a broad variety of vocational training and further education in order to support the development of personal and professional potential. This focuses on the further development and the broadening of specialist knowledge, personal development, language skills, computer literacy, as well as project management. In this respect, the ANDRITZ GROUP demands and promotes two key values in particular:

- Teamwork: Achieving common goals by collaborating across geographical and cultural boundaries. ANDRITZ appreciates employees with different backgrounds, training, experience, and ages who contribute new ideas. This diversity leads to innovation and provides global competitive advantages.
- Customer orientation: Orientation towards customer benefits in order to fulfill customers' requirements in the best possible way with individually tailored solutions.

The main focus of Human Resources Management is to supply and recruit management staff. This includes Group-wide succession planning for key positions, career-developing programs for junior executive managers, and integration of newly-acquired companies. "Global talents" were again identified in 2011 and included in ANDRITZ's three-year "Global Talent Pro-

supporting
the global faces

gram" to prepare these employees for future management assignments. This program focuses primarily on company and staff management within a global network. The participants deal in depth with different cultures, for example, and work together with experienced ANDRITZ managers on global projects. Special attention is paid to developing junior executive managers from China. A separate management program was developed for this purpose and launched in China for the first time in 2011.

Vacancies in key positions could once again be filled mainly by internal candidates, while some managers with global experience were also recruited externally. Engineers are particularly important for ANDRITZ as a technology Group. In order to make ANDRITZ more attractive as an employer for this professional category and tie up highly qualified staff to the Group, a separate career model for engineers was established. In addition to a career in management, ANDRITZ offers a specialized career for engineers. This career path specially demands and promotes finding solutions to complex technological questions that relate to several products and locations, exchange and transfer of know-how, as well as research and development.

Measures to attract university graduates – especially female graduates – were intensified. In addition, investments are being made to improve the work-life balance for employees. The company-run kindergarten at the ANDRITZ GROUP headquarters in Graz and a flexible working hour model for employees with young children are examples of these measures. As a result, more women were also able to qualify for management posts, and numerous managerial functions at the first and second reporting levels were filled by women.

Hand-crafting

Every day, more than 6,000 ANDRITZ employees are working hands-on in 60 manufacturing and service locations worldwide to produce custom-tailored key components as well as wear and spare parts to suit individual customer requirements for ANDRITZ systems and equipment. Around two-thirds of the manufacturing staff work in Europe and North America, and one-third in the emerging countries of Asia, South America, and Eastern Europe. They are assisted by trained temporary staff.

ANDRITZ manufacturing focuses particularly on the production of key components critical to technology and quality. Everything else is largely purchased from qualified suppliers who are subjected to regular quality checks and on-time performance monitoring. With this proven make-or-buy strategy, it is easier to deal with changes in capacity utilization and ensure optimum use of own manufacturing capacities.

All manufacturing locations undergo continuous further development so that they can offer customers the best possible technologies. During the reporting period, investments concentrated on building up and expanding manufacturing capacities in the emerging countries of Asia and South America, as well as in Central and Eastern Europe on the one hand, and on modernizing existing locations in Central Europe and North America on the other. In the HYDRO business area, work continued in 2011 on expanding the Chengdu location, China, for the manufacture of components used in large hydropower projects. In Foshan, China, manufacturing work began on tissue machines and headboxes for the PULP & PAPER business area. Humenne, Slovakia, was expanded and opened as the European manufacturing location for the FEED & BIOFUEL business area. And in order to expand manufacturing capacity in China, a new location is being built in Liyang.

Around two-thirds of the employees at the manufacturing and service locations work in Europe and North America, and one-third in the emerging countries of Asia, South America, and Eastern Europe.

To increase the lifetime of turbines, even under exceptional loads, valuable measurable data is necessary.

More productivity and environmental protection

Research and development at ANDRITZ
To further extend the Group's technological leadership, products and processes are improved and further developed in the ANDRITZ research centers. The main goal is to develop customized technologies that enhance the productivity of customers' plants, minimize operating costs, and increase energy efficiency and environmental protection.

The ANDRITZ organic growth is based mainly on research and development. An average of around 3% of sales is invested annually in researching new technologies and in continuous further development of plants, machinery, and processes. In order to become the preferred technology supplier, the business area's research and development work concentrated on the following topics:

HYDRO

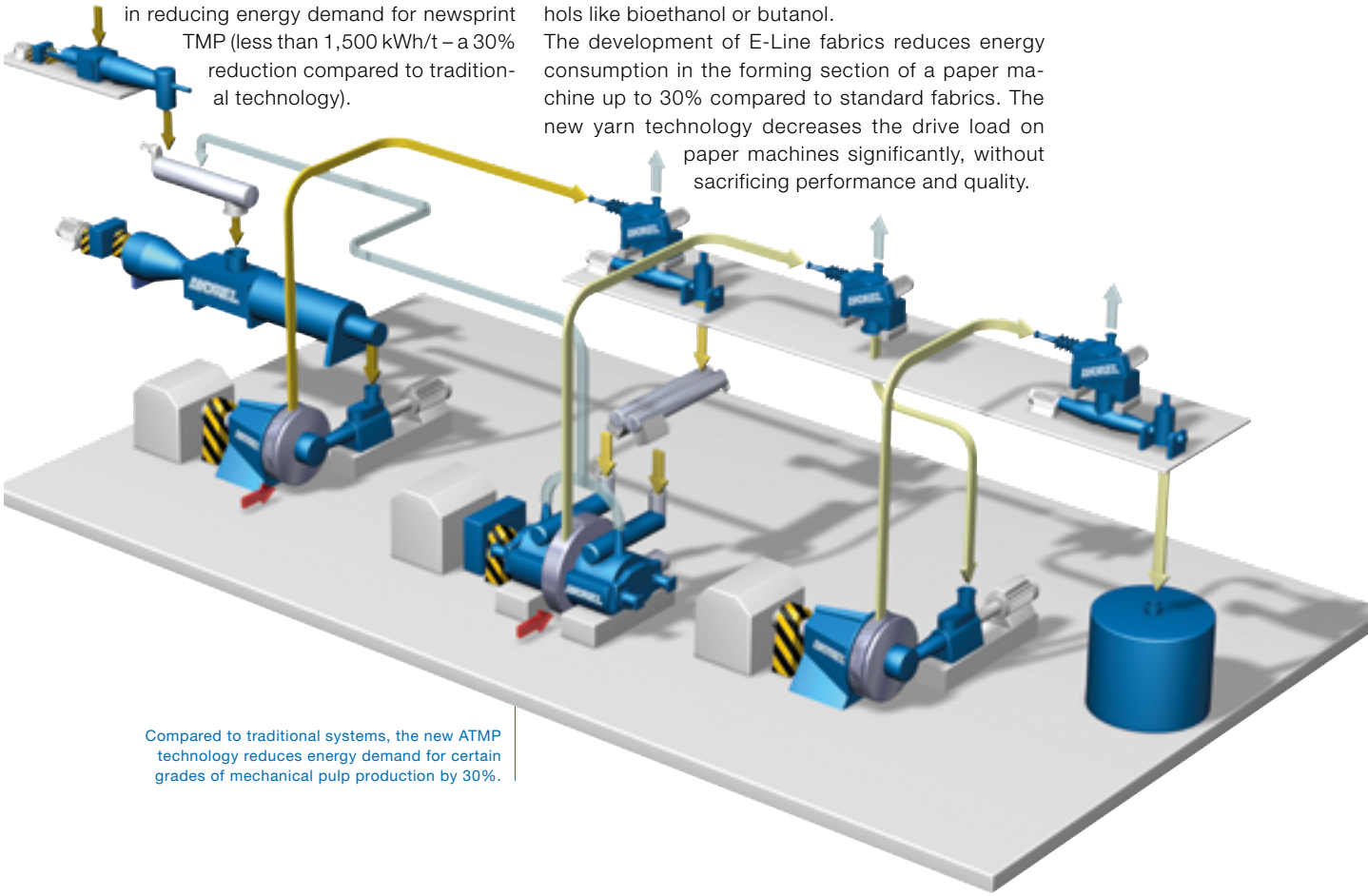
As a result of the rise of renewable energy sources' share in overall electricity production, system operators are facing challenges regarding grid stability, reliability of energy transmission, and flexibility of generating units. In its research and development activities, ANDRITZ HYDRO therefore focuses on flexible, speed-adjustable solutions for hydraulic energy generation. In particular, the generators, electrical and hydraulic equipment, and the higher-level control systems required for this were developed further. As a result of the increasingly dynamic operations, developments in the fields of non-stationary flow simulation, fluid structure interaction, and oscillation diagnosis were intensified.
In collaboration with the École Polytechnique Fédérale de Lausanne, Switzerland, the "Hydrodyna" research project was successfully completed. During this

project, valuable measuring data were obtained on pump turbine loading at low partial load. The target of further development work is to increase the lifetime of turbines, even under exceptional loads.
Cavitation at the tip of a Kaplan turbine blade can result in significant damage to the blade surfaces. This risk predictability was improved in the model test when a non-stationary CFD model (CFD: Computational Fluid Dynamics) and sophisticated measuring equipment were developed. As a result, reliability can be enhanced substantially, particularly in rebuild projects.
Completed was the development of a new concrete volute pump that achieves efficiencies beyond 90% at a flow rate of more than 70 m^3/sec and a motor speed of 200 rpm, as well as a hydraulic system for volute pumps with metal casing for large delivery heads of 300-400 m, which achieves much better efficiency than comparable pump turbine hydraulic systems.
In the mining industry, large volumes of water are conveyed using submersible pumps in order to keep the mines dry. ANDRITZ has a new product group for submersible pumps with sizes up to 16 inches. The pump efficiency can be increased to over 80% and the motor efficiency to approximately 93.5%.

PULP & PAPER

ANDRITZ successfully developed technology for the first full-scale Advanced TMP (ATMP) mechanical pulping line. This technology achieved a world record in reducing energy demand for newsprint TMP (less than 1,500 kWh/t – a 30% reduction compared to traditional technology).

ANDRITZ developed a new auto-hydrolysis process for the continuous production of dissolving pulp which improves pulp quality, increases yield, stabilizes the operation, and is very cost-effective. With this, existing chemical pulp lines can be easily converted to the production of dissolving pulp with only minor modifications. This new ANDRITZ technology has gained rapid acceptance and is being delivered to several customers in Asia where viscose fiber growth is the highest.
In the effort to reduce, and eventually eliminate, fossil fuel consumption in a lime kiln, ANDRITZ recently supplied a kiln to a pulp mill in Sweden that burns 100% wood powder via its modified burner management system.
After successful operation of several pilot plants, the first commercial-scale system using ANDRITZ's new continuous pre-treatment technology for producing ethanol from cellulosic biomass is scheduled to start up in Europe in 2012. In the USA, another order for a demonstration facility was received. The ANDRITZ technologies being employed are proven in other industrial processes and have been modified to satisfy the requirements for biofuel pre-treatment. Hemi-cellulose from the biomass is extracted at a controlled, elevated temperature prior to rapidly exploding the fibers into very small particles. This aids the enzymatic conversion of these small particles into sugars – which are then further converted into biochemicals and alcohols like bioethanol or butanol.
The development of E-Line fabrics reduces energy consumption in the forming section of a paper machine up to 30% compared to standard fabrics. The new yarn technology decreases the drive load on paper machines significantly, without sacrificing performance and quality.



Compared to traditional systems, the new ATMP technology reduces energy demand for certain grades of mechanical pulp production by 30%.

Reduced energy consumption is a critical factor for success also in the panelboard industry. ANDRITZ is developing a new generation of dewatering housings which reduce thermal energy consumption of the fiber dryer by approximately 20%.
Pilot plant work continued with a new system for flue gas desulphurization. The main benefit of the system is a 20% reduction in operating costs.

SEPARATION

In solid/liquid separation, various application requirements were the focus of research and development work. For decanters used in the environmental sector, efforts concentrated on cutting energy consumption, which achieved reductions of up to 40% depending on the size of the decanter and the throughput. The high-speed single-cell drum filters used especially in the plastics industry were expanded to handle larger throughputs, at the same time reducing the specific filtration costs.
In Frohnleiten, Austria, a pilot plant for torrefaction of biomass was started up successfully. Torrefaction improves the fuel properties of biomass so that higher co-incineration rates – and thus savings in CO_2 – can be achieved in coal-fired power stations.

METALS

Further development of the ANDRITZ Pyromars process was one of the research and development activities during the reporting period. This process provides a means of recovering the pickling acid and other valuable substances like chromium and nickel in stainless steel pickling plants. In addition to this economic advantage, a substantial drop can be achieved

Pilot plant for the torrefaction of biomass: improvement of biomass fuel properties and savings in CO_2.

Higher throughput and increase in energy efficiency: the new BioMax pellet mill.

in the landfill of neutralization sludges otherwise occurring and the nitrate load in effluent can be reduced by up to 90%. In order to make use of the residual load left in the rinsing water, a pilot plant that neutralizes and evaporates the rinsing water was started up in cooperation with a customer from China. The concentrate occurring in this plant can be fed to the Pyromars plant and reused for rinsing purposes. In a further expansion stage, the pilot plant is operated with waste heat from the annealing furnace. ANDRITZ can thus offer its customers a completely closed loop for operating media, making use of waste heat that otherwise remains unused.

FEED & BIOFUEL

In order to improve production capacities in pelleting plants using biomass raw materials (especially wood or straw), the business area launched the BioMax pellet mill. BioMax provides double the throughput compared to the highest capacity machines so far available in the market. The higher capacity mill results in fewer lines being required for each plant, lower operating costs due to the reduced need for staffing, as well as increased energy efficiency and low maintenance requirements.

Based on the demand from the aquatic feed and pet food industries, as well as feed ingredient processing industries, the business area also launched a new extrusion program for the production of all kinds of fish feed, shellfish feed, and pet food. The extruders have been improved in terms of capacity, energy efficiency, controllability, wear part and maintenance cost, lifetime, hygienic standards, as well as cleaning.

Company boards

Executive Board

1 Wolfgang Leitner
Joined ANDRITZ in 1987 as CFO, has served as President and CEO since 1994. Responsibilities: Group functions such as Business Process Development, Controlling, Corporate Communications, Human Resources Management, Information Technology, Internal Auditing, Investor Relations, and Treasury. Professional career: member of the Managing Board of AGIV AG, founder and President of GENERICON Pharma GmbH, management consultant at McKinsey & Company, research chemist at Vianova/HOECHST.

2 Karl Hornhofer
Joined ANDRITZ in 1996 and was appointed as member of the Executive Board in 2007. Responsible for the Capital Systems segment of the PULP & PAPER business area and Group-wide for Quality Management. Professional career: Head of the Pulp and Paper Machines division at ANDRITZ AG, Head of the Pulp Drying Systems division at ANDRITZ AG, design engineer at Austrian Energy.

3 Humbert Köfler
Joined ANDRITZ in 1987 and was appointed as member of the Executive Board in 2007. Responsible for the Service and Units segment of the PULP & PAPER business area and for the SEPARATION business area. Professional career: Head of the Paper Mill Services division at ANDRITZ AG, Head of the Mechanical Pulping Systems division at ANDRITZ AG, regional sales manager at ANDRITZ Sprout-Bauer GmbH, export marketing manager at Biochemie GmbH.

4 Friedrich Papst
Joined ANDRITZ in 1979 and was appointed as member of the Executive Board in 1998. Responsible for the HYDRO (pumps division), METALS, and FEED & BIOFUEL business areas, as well as Group-wide for Manufacturing and Procurement. Professional career: Vice President of ANDRITZ Sprout-Bauer Inc., Director of Manufacturing at ANDRITZ AG, Director of Production Planning at ANDRITZ AG.

5 Wolfgang Semper
Joined ANDRITZ in 2006 when the company acquired VA TECH HYDRO and was appointed as member of the Executive Board in 2011. Responsible for the HYDRO business area (except the pumps divison) and Group-wide for Automation. Professional career: member of the Management Board of ANDRITZ HYDRO GmbH and Senior Vice President of the Large Hydro division of the HYDRO business area, management functions at VA TECH VOEST MCE and Voest-Alpine MCE, engineer at Voest-Alpine AG.

Supervisory Board

Elected members:

6 Hellwig Torggler
Attorney-at-law, Hellwig Torggler has been Chairman of the Supervisory Board of ANDRITZ AG since 2010, a member of the Supervisory Board since 2000, Chairman of the audit committee and the nomination and remuneration committee, and was elected until the Annual General Meeting in 2014. Other Supervisory Board functions: member of the Supervisory Boards of Mondi AG, Mondi Services AG, A.S.A Abfall Service AG, and FIMBAG Finanzmarktbeteiligung Aktiengesellschaft des Bundes; Deputy Chairman of the Supervisory Board of Theater in der Josefstadt Betriebsges.m.b.H.

7 Klaus Ritter
The Managing Director of EVG Entwicklungs- und Verwertungs-Gesellschaft m.b.H. and Stahl- und Walzwerk Marienhütte Ges.m.b.H. has been Deputy Chairman of the Supervisory Board since 2011, a member of the Supervisory Board since 2004, Deputy Chairman of the audit committee, a member of the nomination and remuneration committee, and was elected until the Annual General Meeting in 2016. Other Supervisory Board functions: none.

8 Peter Mitterbauer
The Chairman of the Managing Board of MIBA AG has been a member of the Supervisory Board of ANDRITZ AG since 2003, Deputy Chairman of the nomination and remuneration committee, and was elected until the Annual General Meeting in 2014. Other Supervisory Board functions: Chairman of the Supervisory Boards of ÖIAG (Österreichische Industrieholding AG) and FFG (Österreichische Forschungsförderungsgesellschaft m.b.H.); member of the Supervisory Boards of Oberbank AG and Rheinmetall AG.

9 Christian Nowotny
The full-time professor at the University of Economics in Vienna has been a member of the Supervisory Board of ANDRITZ AG since 1999, a member of the audit committee, and was elected until the Annual General Meeting in 2013. Other Supervisory Board functions: member of the Supervisory Boards of Allianz KAG and Generali Drei Banken Holding AG.

10 Fritz Oberlerchner
The Deputy Chairman of the Managing Board of STRABAG SE has been member of the Supervisory Board of ANDRITZ AG since 2006, and was elected until the Annual General Meeting in 2015. Other Supervisory Board functions: Deputy Chairman of the Supervisory Board of STRABAG AG (Austria); member of the Supervisory Boards of STRABAG AG (Germany), STRABAG Zrt. (Hungary), STRABAG A.S. (Czech Republic), STRABAG Sp.z.o.o. (Poland), and Polski Asphalt Sp.z.o.o. (Poland).

11 Kurt Stiassny
The Managing Director of Buy-out ce 2 beteiligungs-management GmbH has been a member of the Supervisory Board of ANDRITZ AG since 1999 (from 1999 until 2010 Chairman of the Supervisory Board and from 2010 until 2011 Deputy Chairman of the Supervisory Board) and was elected until the Annual General Meeting in 2015. Other Supervisory Board functions: Chairman of the Supervisory Boards of Chemson Polymer-Additive AG, Arnoldstein, and Atterbury S.A. (Chemson Polymer-Additive Gruppe, Arnoldstein), and member of the Supervisory Board of Austria Email AG, Knittelfeld.

Delegated members:

12 Georg Auer
Member of the Supervisory Board of ANDRITZ AG since 2011.

13 Isolde Findenig
Member of the Supervisory Board of ANDRITZ AG since 2012.

14 Andreas Martiner
Member of the Supervisory Board of ANDRITZ AG since 2001 and member of the audit committee.

2011 was again a **very positive year** for our business area. In view of our good market position as one of the leading suppliers globally, we were able to profit substantially from the continuing high level of market activity for hydropower equipment and once again achieve a **record order intake.** In Europe and North America, investment activity was concentrated on the **modernization of existing hydropower plants** and the erection of **pumped storage power stations,** which are needed for grid stabilization. In South America and Asia, we received several important orders to equip **new hydropower stations.** As a result of their considerable growth in population and in the economy, these emerging markets face a sharp rise in electricity demand, which is being satisfied more and more by establishing new hydropower capacities. We were also able to benefit from the good project activity in the rapidly growing **small-scale hydropower plant** sector and for **pumps** for irrigation, drinking water transport, and power stations.

Managers of the HYDRO business area
Harald Heber and Michael Komböck (above from left),
Wolfgang Semper and Manfred Wörgötter (below from left)

Clean energy: ANDRITZ HYDRO delivers turbines and generators for the new Hongrin-Leman Plus pumped storage power station, Switzerland.

Major orders in the rapidly growing market for pumped storage power stations

Due to substantial fluctuations caused by electricity generation from wind and solar energy and to the rising importance of regulating energy in enlarged power grids, the use of pumped storage power stations is becoming more and more important. ANDRITZ HYDRO was awarded numerous major orders in this growing market segment in 2011.

Forces Motrices Hongrin-Leman S.A. commissioned the business area to supply electromechanical equipment for the new Hongrin-Leman Plus pumped storage power station, Switzerland, including two 120 MW Pelton turbines and two 130 MVA generators.

For the Nant de Drance 900 MW pumped storage power station, Switzerland, ANDRITZ will supply the penstocks, main inlet valves, and roller gates.

Vorarlberger Illwerke AG placed an order for the modernization of three 115 MVA generators for the Kops II pumped storage power station, Austria.

Electricidade de Portugal (EDP) ordered the supply and installation of electromechanical equipment for the Portuguese Foz Tua pumped storage power station from ANDRITZ HYDRO as consortium leader. The order comprises two reversible 120 MW pump turbines, motor generators, instrumentation, and auxiliary equipment. With this order, the business area is strengthening its leading position in Portugal, one of the most active markets for new pumped storage power stations in Europe. This is already the fourth large order to be placed in four years by EDP with consortia led by ANDRITZ HYDRO.

Strengthening of position in growth market Turkey

Darenhes Elektrik Ãretimi A.S. placed an order for the supply and commissioning of the electromechanical equipment for the hydropower stations Tatar (two 67 MW Francis turbines) and Pembelik (two 66 MW Francis turbines), Turkey.

In the small-scale hydropower sector, ANDRITZ was able to further extend its leading position in Turkey in 2011 and received orders to supply and install the electromechanical equipment for a total of seven hydropower plants.

On behalf of Enerjisa, a joint venture company of VERBUND AG, Austria, and Sabianci Group, Turkey, the Hacininoglu hydropower station (142 MW) was started up successfully. It is the first of three hydropower stations on the Kandil cascade, which will cover approximately 40% of the local electricity demand.

Three Francis turbines each with an output of 89 MW at the Alkumru hydropower station were started up ahead of schedule for Limak Hydro Electric Power Plant Investment Inc.

Extensions and modernizations of hydropower plants in North America

From British Columbia Hydro & Power Authority, ANDRITZ HYDRO received the order for the supply and commissioning of two additional 520 MW Francis turbines at the Mica hydropower station, Canada. In this underground power station, provision for the installation of the two additional units was already made during building work in 1976.

On behalf of AltaGas Income Trust, the entire electromechanical equipment will be supplied and started up for the private Canadian hydropower plant Forrest Kerr, with a total output of approximately 125 MW.

In Grand Coulee, the largest hydropower station in the USA, three Francis units are to be refurbished. A large

portion of the work ordered by the US Department of the Interior, Bureau of Reclamation will be performed on site due to the enormous size of most of the components. From the same customer, the business area received an order for the refurbishment of four 32 MW Francis turbines at the Palisades hydropower station. Pacific Gas and Electric awarded the business area to refurbish and start up new runners for the Belden hydropower station, USA.

Large Francis turbine goes into operation successfully in Portugal

The ANDRITZ HYDRO Francis turbine for the extension of the Bemposta hydropower station of Electricidade de Portugal (EDP) has been supplying eco-friendly electricity since the end of 2011. With an output of 193 MW and a runner diameter of 6 m, the turbine is one of the largest of its kind in Western Europe.

Ecuador generates almost half of its energy from hydropower

The business area is to supply the main components for eight 187 MW Pelton turbines for the Coca Codo Sinclair hydropower station, Ecuador. With a total output of 1,500 MW, the power station will cover around one-third of the entire electricity demand in Ecuador. Almost half of the electricity in Ecuador is already generated from hydropower.

World's most powerful tidal power plant in operation

The world's largest tidal power plant in Sihwa, South Korea, went into operation successfully. For an order from Daewoo Engineering & Construction Co., Ltd., ANDRITZ HYDRO supplied the essential parts of the electromechanical equipment for ten 26 MW bulb turbine units. One bulb turbine has an impeller diameter of 7.3 m.

Modernization of Russian power station

JSC Territorial Generating Company No. 1 (TGK1), the third largest power generating company in Russia, awarded the business area with the refurbishment of the two 48 MW Kaplan turbines, the generator windings, and the instrumentation at Iovskaya hydropower station.

Brazil relies on the continuous expansion of hydropower resources

Within the scope of the Belo Monte hydropower project and as part of a consortium, the business area received the order from Norte Energia to supply three 620 MW Francis units and 14 excitation systems for the main Belo Monte plant, as well as six 40 MW bulb turbines, six generators, the entire auxiliary equipment, and additional hydromechanical components for the Pimental hydropower plant. The Brazilian government is thus continuing to expand its hydropower resources, which provide approximately 80% of the electricity produced in Brazil. In full operation, Belo Monte will supply electricity for approximately 35 million people, and thus support the strong economic and population growth in Brazil.

For Maggi, ANDRITZ HYDRO Inepar is to supply the complete electromechanical equipment for the Ilha Comprida (2 x 10 MW) and Segredo (2 x 14 MW) small-scale hydropower stations.

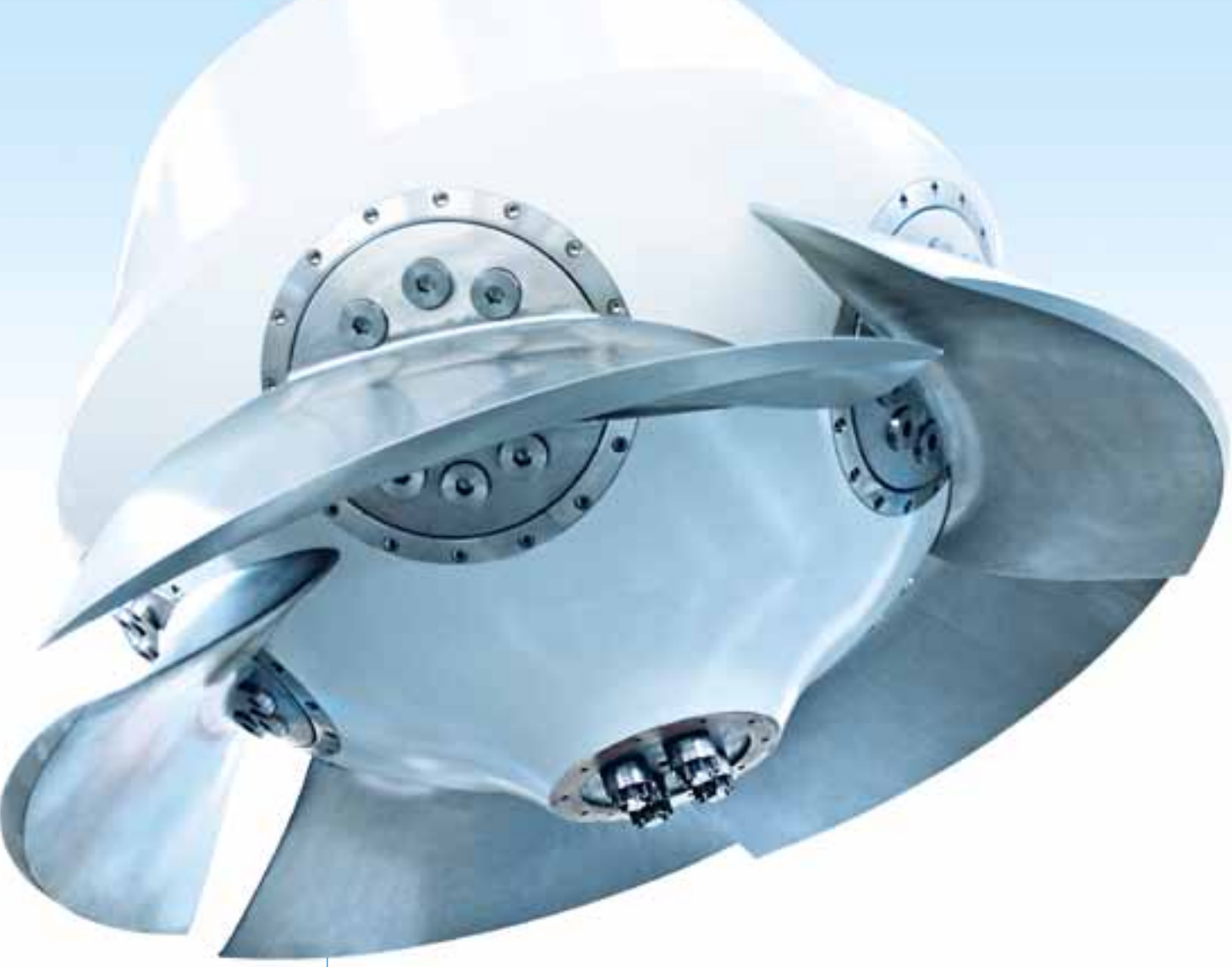
The electromechanical equipment for the Garibaldi hydropower station will be supplied to Triunfo. The output of the three 59 MW Francis turbines covers the power requirement of a Brazilian city with approximately one million inhabitants.

Three Francis turbines (total output: 75 MW) in Rondon II hydropower station and the first of three Kaplan units (45 MW each) to be refurbished at Mascarenha hydropower station were started up successfully.

Hydropower expansion in Costa Rica

The business area has received an order from ICE (Instituto Costarricense de Electricidad) to supply and commission the electromechanical equipment for Reventazón hydropower station, Costa Rica. The scope of supply includes four 74 MW Francis turbines, four 86 MVA generators, gates, a 14 MW Francis unit to supply power to the plant itself, the entire instrumentation, additional mechanical and electrical equipment, and the main transformer and switchgear.

In South Korea, the world's largest tidal power plant went into operation (see below). ANDRITZ HYDRO supplied the essential parts of the electromechanical equipment for ten bulb turbine units. One bulb turbine has an impeller diameter of 7.3 m (right).



Cooling water pump with hydraulic blade adjustment for the Moorburg thermal power plant, Germany.

Five 200-tons turbines

The Simon Bolivar hydropower power plant (formerly Guri) will cover over 50% of Venezuela's entire power demand. On behalf of Electricidad del Caroní (EDELCA), ANDRITZ HYDRO is to modernize five machines for the Simon Bolivar II plant section and thus increase its output by approximately 10%. The first of the five 770 MW Francis turbines was started up in 2011. These turbines have exceptional dimensions: 3.7 m high, 7.4 m in diameter, and 200 t in weight.

Higher grid security with new hydropower plant in Malaysia

To Salini Malaysia SDN BHD, the business area will deliver and start up the electromechanical equipment for the new Ulu Jelai hydropower plant, including two 191 MW Francis units. Tenaga Nasional Berhad (TNB) is Malaysia's largest utility company and will use the power plant to cover peak demand levels, and thus increase grid security in Malaysia.

Rising demand for small-scale hydropower plants in Southeast Asia

Sunwest Water & Electric Co. Inc. awarded the business area to supply the complete electromechanical equipment for the Villasiga small-scale hydropower plant, Philippines, including turbines, generators, and auxiliary equipment.

From PT Haji La Tunrung L&K, ANDRITZ HYDRO received an order to supply the electromechanical equipment for the Bungin 1 small-scale hydropower plant in Indonesia. The business area will also equip the Indonesian small-scale power plant Lubuk Gadang.

Australia: turbines supplied nearly 50 years ago now refurbished

For Hydro Tasmania, Australia, two Kaplan turbines will be refurbished for the Paloona (30 MW) and Meadowbank (41.76 MW) hydropower plants. The turbines have been operating since 1964 and were installed by ANDRITZ HYDRO.

A standard model for the sizing of instrumentation in hydropower stations was prepared with Hydro Tasmania on the basis of a framework agreement. This standard, which is also used in the Paloona and Meadowbank hydropower stations, was implemented for the first time at the Tungatinah power plant.

100 turbogenerators

More than 100 turbogenerators were delivered during the reporting period. In order to meet the rising demand for higher power ratings of heavy, hydrogen-cooled turbogenerators, work began on erecting a new manufacturing site for final assembly and performance testing at the existing location in Linz, Austria.

Flexible operating range for cooling water pumps in thermal power stations

The business area will supply six cooling water pumps and four cooling tower pumps to Moorburg thermal power plant, Germany, under an order from Vattenfall Europe Power. Due to the substantial tidal variations and different heads (10-24 m), all ten pumps are designed as vertical line shaft pumps with hydraulic blade adjustment, which guarantees that the equipment can adapt rapidly to the changes in head. ANDRITZ has made use of its many years of experience in turbine engineering and transferred the advantages of hydraulic blade adjustment to cooling water pumps.

Pumps for environmental protection in South Africa

As part of an investment program to protect the environment, ANDRITZ HYDRO was commissioned by Central Rent Gold to supply two submersible motor pumps (including conveying equipment) for the drinking and industrial water supply in Johannesburg, South Africa. Each pump weighs 20 t and delivers 1,500 m^3/h.

Further important orders and events

Country	Customer	Scope of supply/project description
Austria	VERBUND Hydro Power AG	Revision of pump turbine 2 at the Limberg pumped storage power station; upgrade of a Pelton turbine at Mayrhofen storage power station
Azerbaijan	Cengiz	Mechanical equipment for the Semkircay small-scale hydropower plant
Chile	Besalco S.A.	Turbine delivery for the Los Hierros small-scale hydropower plant
China	East China Grid Company	Automation systems for the hydropower plant Xinanjiang
China	Nine Dragons Paper	319 process pumps for a new paper machine
France	Electricité de France	Supply of six 103 MW Pelton turbines and rehabilitation of twelve inlets for the La Bathie hydropower station
Germany	EON	Supply of a new central control station for the integration of up to 100 hydropower stations operated by EON
Germany	VERBUND-Innkraftwerke GmbH	Complete electromechanical equipment for the Gars small-scale hydropower plant
India	Confidential	Three vertical spiral casing pumps for a pump station irrigating agricultural land
Italy	SEL S.r.l.	Supply of four new Pelton turbines for the Molini di Tures hydropower station
Italy	ENEL Produzione S.p.A.	Refurbishment of the Pelton turbines and generators at the Lappago hydropower station; electromechanical equipment for the Soverzene hydropower station
Morocco	Indra Sistemas SA	Turbine modernization
Nigeria	Shiroro Hydro-electric PLC	Generator revision and refurbishing at Shiroro hydropower station
Norway	Norsk Hydro Produksjon AS	Upgrade of three Francis turbines and mechanical refurbishing at Rjukanstrengen hydropower station
Panama	UTE Plaza Caisan (Cobra)	Electromechanical equipment for the El Alto small-scale hydropower station
Panama	UTE Pedregalito (Cobra)	Turbine and generator for the Mendre II small-scale hydropower plant
Portugal	EDP	Electromechanical equipment for the Ribeiradio hydropower station
Singapore	Confidential	60 centrifugal pumps for a water treatment plant
Sweden	Jämtkraft AB	Complete electromechanical equipment for the Hissmofors hydropower station
Sweden	Vattenfall AB	Rehabilitation of three Kaplan turbines in the Laxede hydropower station
Switzerland	Kraftwerke Hinterrhein AG	Refurbishment of four Francis turbines of the Bärenburg hydropower plant
Switzerland	Hydro Exploitation	Two Pelton runners for the 146 MW Bitsch hydropower station
Turkey	Kalyon Insaat	Delivery and commissioning of the electromechanical equipment for the Ordu small-scale hydropower plant
USA	East Texas Electricity	Refurbishment of the turbine at Lake Livingston hydropower station




We are **very satisfied** with the business development in 2011. We were able to achieve **record levels** both in sales and order intake, and we have substantially strengthened our product portfolio for our customers with some important acquisitions. All in all, the market environment remained solid. Following an investment suspension for new pulp mills in 2009 and 2010, we succeeded in winning large orders to equip **new pulp mills** in South America during the last year thanks to our leading market position. We also received numerous important orders for the **modernization** and **expansion** of existing pulp mills – solid project activity was noted worldwide in both sectors. Further investments concentrated on the **environment area** where we are offering a series of technologies to conserve natural resources as much as possible. In addition, there was considerable project activity for **biomass and recovery boilers** used in energy generation. In this growing market segment we also strengthened our position significantly in 2011.

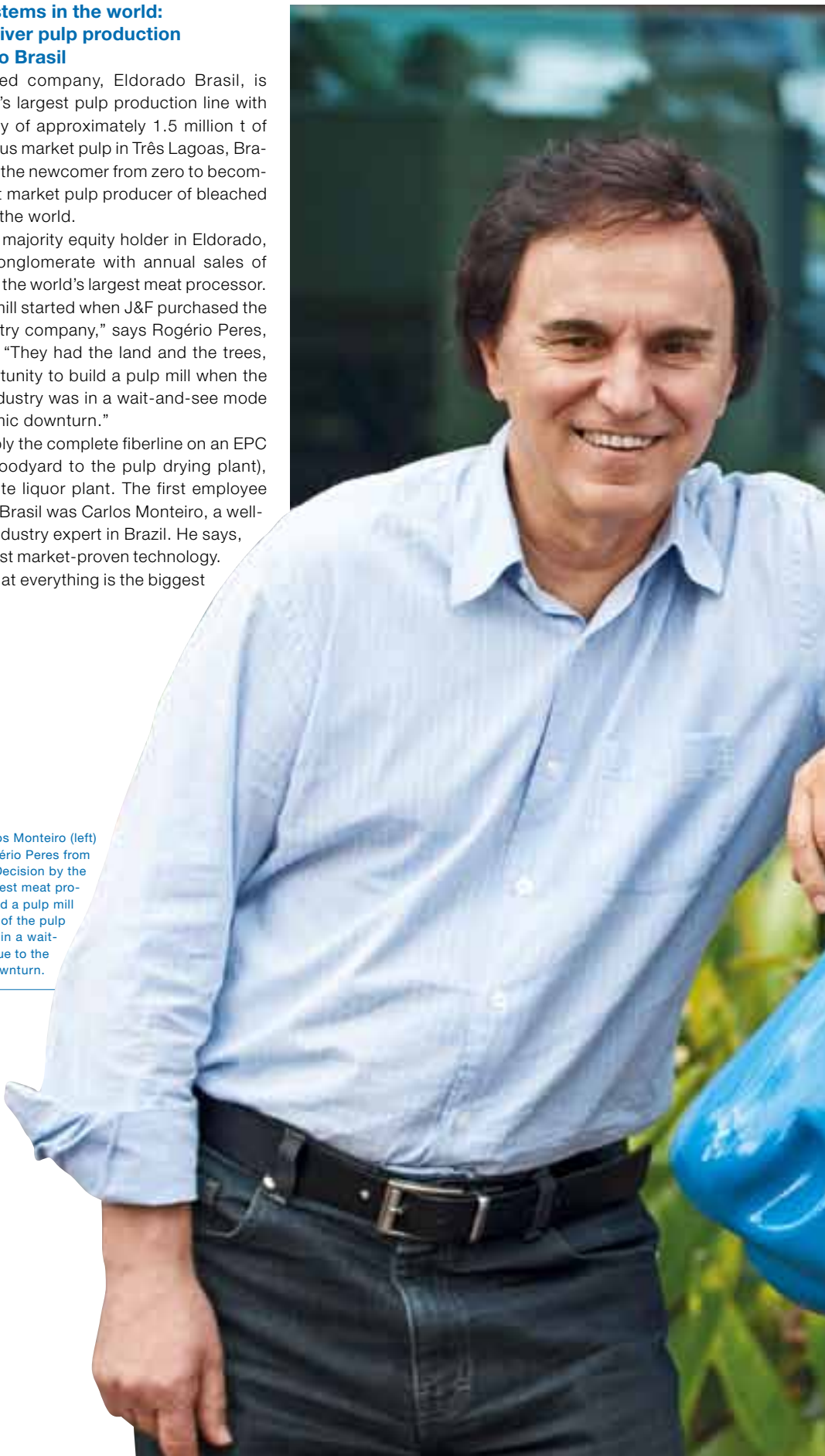
Managers of the PULP & PAPER business area
Karl Hornhofer (above) and Humbert Köfler

The biggest systems in the world: ANDRITZ to deliver pulp production line for Eldorado Brasil

The newly founded company, Eldorado Brasil, is building the world's largest pulp production line with an annual capacity of approximately 1.5 million t of bleached eucalyptus market pulp in Três Lagoas, Brazil. This will propel the newcomer from zero to becoming the fifth largest market pulp producer of bleached hardwood pulp in the world.

J&F Holdings, the majority equity holder in Eldorado, is an industrial conglomerate with annual sales of 30 billion USD and the world's largest meat processor. "The idea for this mill started when J&F purchased the majority of a forestry company," says Rogério Peres, CEO of Eldorado. "They had the land and the trees, and saw an opportunity to build a pulp mill when the rest of the pulp industry was in a wait-and-see mode due to the economic downturn."

ANDRITZ will supply the complete fiberline on an EPC basis (from the woodyard to the pulp drying plant), as well as the white liquor plant. The first employee hired by Eldorado Brasil was Carlos Monteiro, a well-recognized pulp industry expert in Brazil. He says, "We bought the best market-proven technology. The challenge is that everything is the biggest in the world!"



Carlos Monteiro (left) and Rogério Peres from Eldorado: Decision by the world's largest meat processor to build a pulp mill when the rest of the pulp industry was in a wait-and-see mode due to the economic downturn.

Montes del Plata pulp mill, Uruguay: “World-class sustainable standards”

Montes del Plata, a joint venture company of Stora Enso, Finland, and Arauco, Chile, awarded ANDRITZ with the supply of production technologies and equipment for a new pulp mill in Punta Pereira, Uruguay. The mill will utilize eucalyptus mainly from Montes del Plata’s own plantations and is designed for an annual capacity of 1.3 million t market pulp. The order includes an EPC delivery of the complete fiberline, the recovery boiler, the evaporation plant, the white liquor recovery system, and the biomass boiler.

Construction and operation of the pulp mill is providing a significant positive economic stimulus to Uruguay – it is the largest private investment in the history of the country. An average of 3,200 people, and at peak 6,000, will be employed during construction. Once the mill is operational, it will permanently employ 500 highly qualified people.

“We want this mill to be a showcase for how to operate with world-class sustainable standards,” Franco Bozzalla, Arauco’s Managing Director for pulp business, and Bernd Rettig, Stora Enso’s Executive Vice President for technology and strategy, emphasize. Together with ANDRITZ, this should be managed very successfully. ANDRITZ also has plenty of experience in Uruguay, gained during the successful implementation and start-up of the Fray Bentos pulp mill in 2007, for which ANDRITZ not only supplied all the major production systems, but also provides all maintenance services.

In Uruguay, ANDRITZ erects a new pulp mill for Montes del Plata that will utilize eucalyptus mainly from plantations.

Long-term maintenance contracts with well-known pulp producers

After start-up of the Montes del Plata pulp mill, scheduled for the first half of 2013, ANDRITZ will also provide complete maintenance services for about eight years. The maintenance goals are to increase the plant availability and minimize production losses. A local ANDRITZ subsidiary has been conducting all maintenance work for the UPM mill in Fray Bentos, Uruguay, for four years now. In the reporting period, a millwide maintenance contract for several years was also signed with Veracel Celulose, Brazil. And a consortium formed by ANDRITZ and Botnia Mill Service Ab signed an agreement with Oy Metsä-Botnia Ab to improve the availability at Botnia's Joutseno pulp mill, Finland.

Board machine rebuilt in just 22 days

For Reno de Medici, one of Europe's biggest cartonboard producers, ANDRITZ rebuilt the wet end of a board machine at the Santa Giustina mill, Italy. The target for the rebuild was to raise the quality of folding boxboard and increase production. ANDRITZ rebuilt the forming section and added a new headbox. The work took only 22 days, with the board machine starting back up on schedule. "Within only three months, we were able to increase daily capacity from 700 up to more than 870 tons," says mill director Francesco Canal. "The surface properties of our board are better and we are saving money in raw materials as well."

Finnish paper machine on its way to Russia

SFT Group, one of Russia's fastest growing companies in the corrugated packaging sector, chose ANDRITZ to provide project management and on-site services for the dismantling of a kraft paper machine that had been shut down in Finland and is being relocated to Russia. There, it will be reconfigured to a modern board machine for the production of packaging papers, with ANDRITZ supplying key technologies for the rebuild.

European quality made in China: 122 sold pressurized refining systems

A fourth order from the Hebei Kaiyue Group, a fourth system for Shangdong He You Group, and a third line for Furen Group – all in China and all in 2011. This brings the number of ANDRITZ pressurized refining systems sold to customers in the fiberboard industry in China to 122. One secret of this success: ANDRITZ manufactures complete chip washing and pressurized refining systems with European quality in China.

OPP-ortunities to improve

CMPC Celulosa's mill in Santa Fe, Chile, has successfully started utilizing the ANDRITZ OPP service (OPP: Optimization of Process Performance) and is thus increasing production while reducing costs. Examples of OPP successes: further raising capacity of the pulp dryer, automating and reducing of ramp-up time of the bleach plant (from 8-12 h down to 2-3 h), and stabilizing the digester feed at high production rates (resulting in additional throughput).
For Oji Papéis Especiais, Brazil, South America's largest manufacturer of heat-sensitive papers, the OPP team developed a solution to automatically compensate for filler and mineral loads in the paper when production rates change. Thus, the Oji mill was able to reduce the amount of purchased pulp by 2%.

Independent of fossil fuels

ANDRITZ is delivering a Circulating Fluidized Bed (CFB) gasification plant to Metsä-Botnia's Joutseno pulp mill, Finland. The 48 MW plant will generate green fuel gas from local biomass, thus making the mill independent of fossil fuels. Waste heat from other process steps in pulp production will be used in an innovative ANDRITZ belt dryer to increase the dryness of the biomass prior to gasification.

CMPC Celulosa's pulp mill, Chile: increase of production and reduction of costs.

Country	Customer	Scope of supply/project description
Australia	Visy Pulp & Paper Pty. Ltd.	Evaporation plant modernization
Brazil	Rigesa Celulose Papel e Embalagens	Modernization of washing and screening areas in the fiberline; EPC supply of OCC processing line, defiberizing equipment, and high consistency reject refiners
Chile	CMPC Santa Fe	Successful start-up of a recovery boiler after upgrade
China	Zhanjiang Chenming Pulp & Paper Co. Ltd	Start-up of a new pulp mill; ANDRITZ delivered all key equipment: woodyard, fiberline, pulp drying line, evaporation plant, recovery boiler, and white liquor plant; cooking and evaporation plant upgrade for the production of dissolving (viscose) pulp
China	Xinxiang Xinya Group Co., Ltd.	Rebuild of a softwood CTMP line, purchased by the customer in Canada, to one of the largest hardwood mechanical pulping lines in China
China	Jiangsu Bohui Paper Industry Co., Ltd.	Approach system for a new three-layer board machine – the largest in the world
China	Hebei Changtai Industry Co.	Seven headboxes, shoe press, hard nip calender, film press, and airturn system
China	Hunan Tiger Forest & Paper Group	New P-RC APMP mechanical pulping line
China	Asian Pulp and Paper	Start-up of two P-RC APMP mechanical pulping lines in record time, setting production records for single mechanical pulping lines in China
China	Various customers	Eight nonwoven hydroentanglement units
Czech Republic	Mondi Steti	Evaporator modernization
Czech Republic	Pegas Nonwovens	Thermobonding calender for production of nonwovens
Germany	Zellstoff- und Papierfabrik Rosenthal GmbH	Modernization of recovery boiler and recausticizing plant
India	JK Paper	Fiberline and recovery island
Indonesia	PT Riau Andalan Pulp and Paper	Recausticizing upgrade
Israel	Hadera Paper	Forming fabrics
Italy	Cartiere del Polesine S.p.A.	Two-layer headbox
Japan	Doh-Ei Paper Mfg.	PrimeDry steel yankee
Laos	Sun Paper Holding Lao Co.	Equipment for chip and bark handling, complete fiberline, pulp drying line, and white liquor plant for a new pulp mill
Poland	Stora Enso Narew Spolka z o.o.	Complete OCC processing line and rejects handling system to supply a new 455,000 t/a board machine
Portugal	Soporcel	New evaporator train and modernization of existing plant
Russia	LLC Pulp Invest	Tissue machine including stock preparation plant and PrimeDry steel yankee
Russia	Solikamskbumprom	Upgrade of two TMP plants supplied by ANDRITZ with the energy-efficient and resource-sparing ATMP process
Russia	JSC “Ilim Group”	Recovery boiler rebuild
Slovakia	MOL Hungarian Oil and Gas	Flue gas desulpherization plant
Slovenia	Količevo Karton Proizvodnja Kartona d.o.o.	Modernization of the wet section of a 3-layer board machine to improve its product quality and extend the range of board products
South Africa	Sappi Southern Africa (Pty) Ltd.	Pulp dryer upgrade
South Korea	Daelim Industrial	Production line for plastic films for the packaging industry
Sweden	Stora Enso	New woodyard including debarking line with de-icing, two chipping lines, and a new bark crusher
Thailand	Phoenix Pulp and Paper Co., Ltd.	Complete wood processing line including debarking drum, chipper, and new stacker/reclaimer technology
UK	Iggesund Paperboard Ltd. Workington	Biomass boiler island including biomass receiving and storing systems
USA	Confidential	New biomass boiler including biomass feed, sand, and ash handling systems
USA	Packaging Corporation of America	Start-up of a new recovery boiler at the Valdosta mill, Georgia, and of a rebuilt recovery boiler at the Counce mill, Tennessee

Further important orders and events




Our business area saw **positive** development in 2011. With strong organic growth and the recently acquired companies, we strengthened our market position substantially in solid/liquid separation. Thus, we were able to profit from the positive environment in all of the markets we serve. The project activity for **municipal sludge dewatering** plants developed satisfactorily worldwide, with the main focus on Asia. In the **industrial process applications** sector, investment activity was good in South America, Asia, and Russia, particularly in the chemical, mining, minerals, and fertilizer industries. The market for **municipal sludge drying** plants saw a solid development, with main investment activities in North America and Europe. Last, but not least, the demand for **drying plants in the industrial** sector, particularly for potash, polymer, and urea, was also positive.

Managers of the SEPARATION business area*
Thomas Bachhofner (above) and Christian Pedratscher

* The ENVIRONMENT & PROCESS business area was renamed SEPARATION as of October 1, 2011.

Pusher centrifuge orders in Algeria, South Korea, and the USA

During the reporting period, the business area received several important orders for the supply and rebuild of pusher centrifuges, used for solid/liquid separation in various industries (such as the chemicals, plastics, mining, fiber, and food industries). A customer in the USA commissioned ANDRITZ SEPARATION to modify a pusher centrifuge for the paraxylene process. Paraxylene is used for the production of polyester fabrics and PET bottles, for example. Four of these pusher centrifuges were also delivered to a refinery in Algeria and another five to a petrochemical industry customer in South Korea.

Stringent hygienic standards for vegetable proteins extraction

ANDRITZ will supply equipment for the extraction of vegetable proteins to France. The centrifuges are fitted with a CIP (Cleaning In Place) system and thus meet the stringent hygienic standards required in the food processing industry. Valuable proteins can be extracted as a by-product from such crops as soy, rapeseed, peas, or potatoes, for use in the food industry to increase nutritional value, for example, or make use of their functional properties (foaming and emulsifying, gelling, etc.).

Valuable nutrients for corn, soy bean, and rice growing

ANDRITZ received an order to supply three high-temperature fluidized bed dryers to a leading fertilizer company in Canada for its potash mine expansion. Canada holds approximately 50% of the world's potash reserves, an important nutrient used to boost such crops as corn, soy beans, and rice.

Scottish Power relies on wear-resistant drying drums

The installation of six drums for the drying plant operated by SMW Ltd. (Scottish Power), Glasgow, Scotland, was successfully completed. The design of the drums was further developed for SMW to provide particularly high-wear resistance, thanks to the high-strength materials.

Healthy drinking water and eco-sensitive recycling of sewage sludge in the USA

Upper Occoquan Service Authority (UOSA), Virginia, USA, ordered a drum drying system. The UOSA plants play an important role in the drinking water supply for the Washington metropolitan area. Some smaller municipalities in the USA, including Camas and Shelton, Washington, also installed this eco-friendly belt drying system in 2011. These drying plants enable

A pusher centrifuge for the paraxylene process. Paraxylene is used for the production of polyester fabrics and PET bottles, for example.

reuse of the solids derived from biological treatment of the wastewater. Some of the plants use renewable digester gas for fuel. The high-grade granulate produced is used in agriculture as a soil amendment and in the fertilizer blending industry.

Cement works in Turkey uses waste heat efficiently

The sewage sludge drying plant supplied to Nuh Cimento cement works, Turkey, was handed over successfully. The plant makes particularly efficient use of the waste heat from cement production: With evaporation performance of more than 8 t/h, the sewage sludge is dried by the waste heat, while around 2,250 kg of granulate are produced per hour and reused as auxiliary fuel (10,000-12,000 KJ/kg) in cement production. The entire heating system for the dryer operates separately and does not influence the rotary kiln in any way.

Newly developed sewage sludge dryer

The business area will supply sewage sludge dryers for the municipal wastewater treatment plants in Suwalki and Koszalin, Poland. These dryers are part of a newly developed modular series comprising five dryer sizes (evaporation rate: 1,000-3,000 kg H_2O/h), thus complying in particular with the requirements of smaller to medium-sized municipal wastewater plants. The sludge input module and the granulate output module can be used in two sizes for all five dryers without any technical modifications. Furthermore, these new dryers are very service-friendly because the number of rotating parts has been minimized.

Belt dryer for biomass gasification plant in Finnish pulp mill

As part of an order awarded to the PULP & PAPER business area to deliver a biomass gasification plant for Metsä-Botnia's Joutseno pulp mill, Finland, the SEPARATION business area will supply the belt dryer for wood chip and bark drying. In order to guarantee optimum economical operations, the belt dryer has been designed as a hybrid model (water evaporation rate: 12 t/h). The waste heat from the existing pulp mill is used as drying energy for the low-temperature belt dryer.

Sludge treatment plant in Düsseldorf, Germany: more output, enhanced safety

The city of Düsseldorf, Germany, awarded ANDRITZ to rebuild the Düsseldorf-Nord sewage sludge treatment plant. Thanks to a new back-mixing process, production and safety in the plant can be optimized, and the maintenance effort required is reduced considerably as some equipment units are no longer needed.

Further important orders and events

Country	Customer	Scope of supply/project description
Argentina	Confidential	Eleven screen bowl centrifuges to dewater potash
Argentina	Confidential	Fluidized bed dryer for drying urea
Australia	Rio Tinto Alcan Gove	Rebuild of six vacuum drum filters
Brazil	Vale Fertilizantes SA	Overhead filter press for the production of fertilizer
Brazil	Itafos Mineração Ltda.	Two thickeners and two overhead bar chamber filter presses for the phosphate industry
China	Hengli Petro-chemical (Dalian)	Twelve drum filters for the world's largest production facility for terephthalic acid which is used in the production of plastics
China	Jiaxing Petro-chemical Co., Ltd.	Four drum filters for petrochemical processing
China	Sichuan Shuncheng Chemical Corp., Ltd.	Two horizontal peeler centrifuges for production of agrochemicals
China	Hainan Yisheng Petrochemical	Four drum filters for the petrochemical industry
China	Shenmu Daliuta, Dad	Three hyperbaric filters for fine coal dewatering; nine side bar filter presses
China	Xinjiang Zhongthai Chemical	Two fluidized bed dryers for PVC production
China	JSC Shchekinoazot	Fluidized bed dryer
France, Poland, Turkey	Various customers	The Safe-T-Box, developed by ANDRITZ as a result of increasing demands in safety engineering, was retrofitted to numerous belt drying plants for various customers in France, Poland, and Turkey
Israel	Dead Sea Works Ltd.	Six screen-scroll centrifuges for potash dewatering
Poland	Soda Polska Ciech	Fluidized bed dryer for sodium bicarbonate
Russia	Stroj-service	Two hyperbaric filters and three heavy duty belt presses for the beneficiation of coke coal in the OOO Rasres Beresovskij open pit mine, Siberia
Russia	MPO Kuzbass	Three high-efficiency belt presses for coal dewatering
Russia	Eurochem	Two vacuum belt filters for potash production
Russia	LLC Eurochem Wolgakaliy	Two horizontal vacuum belt filters for preparation of potassium salt
Russia	JSC Shchekinoazot (Schekino)	Fluidized bed dryer for ammonium sulphate
Russia	JSC SODA (Sterlitamak)	Fluidized bed dryer for sodium bicarbonate
Russia	Chernigovets	Three side-bar membrane filter presses for dewatering of coal concentrate
Sambia	Konkola Copper Mine	Eight side-bar chamber filter presses for the dewatering of copper concentrate
Spain	OHL Medio Ambiente, INIMA, S.A.U.	Start-up of the new drying drum for the Granollers plant
South Africa	Alstom Power	Four horizontal vacuum belt filters for Kusile power station where Africa's first wet flue gas desulphurization plant will be erected
Taiwan	Formosa Laboratories, Inc.	Four centrifuges for processing various pharmaceutical products
Thailand	Almendra	Four peeler centrifuges for the production of artificial sweetener
UK	Southern Water Services	Equipment and upgrade of drum drying plants at Budds Farm, Sandown, Ford, and Hastings
USA	Cargill	Fluidized bed cooler for drying and cooling synthetically produced sweetener
USA	Trinity River Authority, Dallas	Two Hydrasieve screens for treatment of municipal sewage sludge
USA	HPD, LLC	Two decanter centrifuges
USA	Evonik Degussa Corporation	Fluidized bed dryer for lysine

By rebuilding the sewage sludge treatment plant in Düsseldorf-Nord, Germany, the plants' production capacity and safety will be optimized.

As we expected, 2011 was a **difficult year due to the market conditions.** Project activity for plants and equipment for the production and processing of stainless steel, carbon steel, and non-ferrous metal strip was **moderate.** Some steel producers, particularly in Europe and North America, postponed or canceled their investments due to the low and widely fluctuating capacity utilization rates and due to the continuing uncertainty regarding further macro-economic development. As a result, investment activity was very subdued in Europe and North America. However, we were able to win **important orders** in the emerging markets of South America and Asia, mainly in China and India, thanks to our leading market position in the stainless steel sector. In the face of this difficult environment, the business area saw an overall solid business development.

Managers of the METALS business area
Heinz Hödl (above) and Paul Krekel

Annealing and pickling line for new stainless steel works in Malaysia

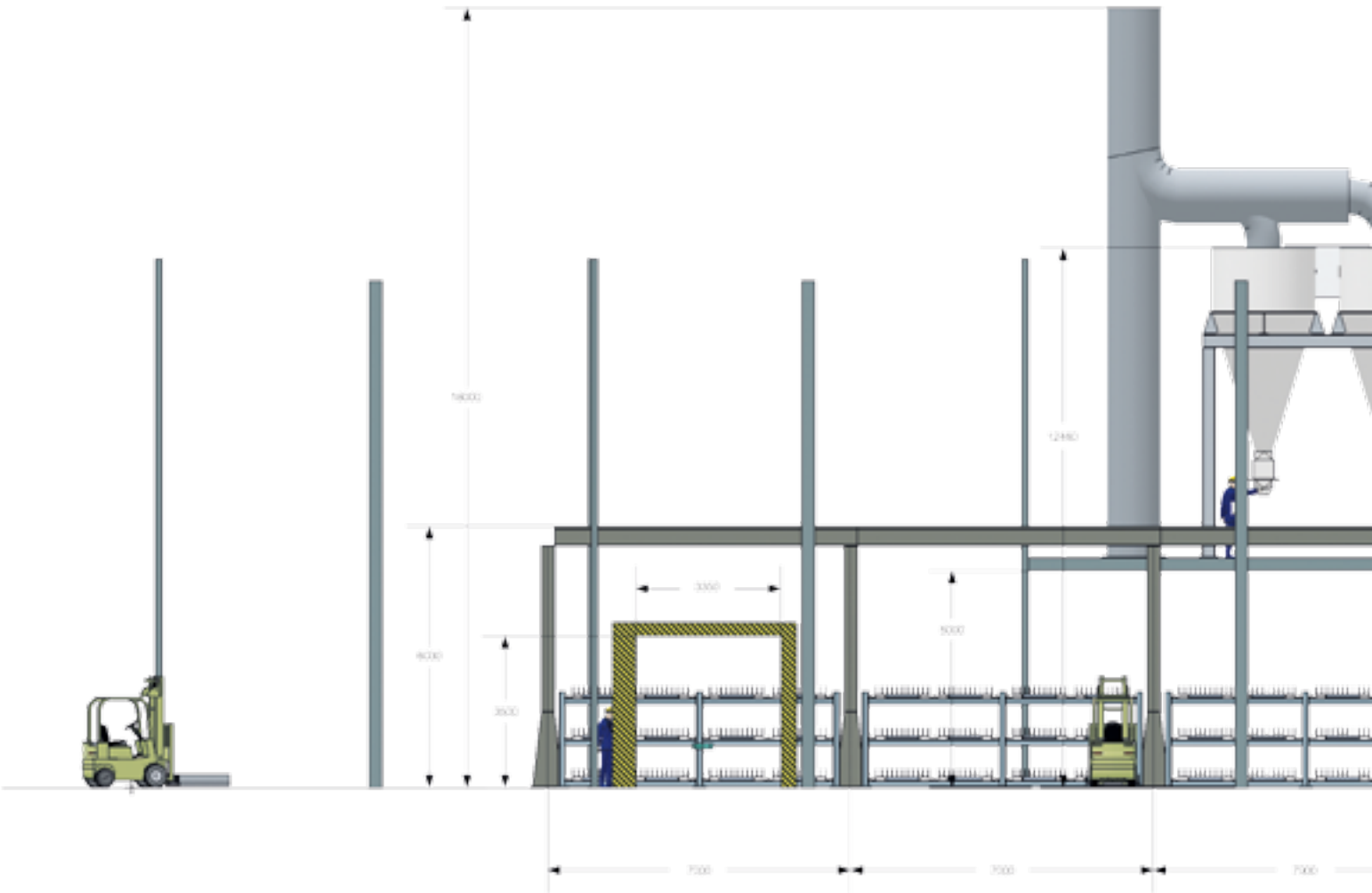
Bahru Stainless SHN BHD, a joint venture company of Acerinox S.A., Spain, and Nisshin Steel, Japan, awarded ANDRITZ METALS to supply an annealing and pickling line for the production of cold-rolled stainless steel strip. The order comprises the supply and installation of the complete mechanical equipment, the furnace and pickling section, the inline skin-pass mill, as well as the electrical and automation equipment for a new stainless steel works in Malaysia. The plant will produce cold-rolled strip in a thickness range of 0.25-2.5 mm and up to a maximum width of 1,600 mm.

Rolling mill for the production of carbon steel in South Korea

The business area is to supply a 6-high rolling mill with an annual capacity of 169,000 t for Dongkuk Industries Co., Ltd., a South Korean carbon steel producer. The scope of supply includes the mechanical and the complete electrical equipment for the plant, which is to produce low, mid, and high carbon steel with thicknesses ranging from 0.4-10.0 mm and a maximum width of 650 mm. Dongkuk Industries already has an ANDRITZ S6-high rolling mill and a roll grinding machine in operation.

Daimler and Schaeffler rely on presses from ANDRITZ METALS

From Daimler AG, the business area has received the order to deliver three servo-presses for Daimler's plants in Sindelfingen and Bremen, both Germany. The machines have a pressing force of 25,000 kN and 12,000 kN, respectively. The conveying and transfer equipment, the part discharge systems, as well as the complete automation equipment are also included in the scope of supply.



For plants in China, Germany, and the USA, ANDRITZ will also deliver three presses, each with a pressing force of 6,300 kN, to LUK GmbH (Schaeffler Group). LUK already has three ANDRITZ presses operating successfully at its site in Bühl, Germany.

100,000 t of aluminum strip for the automobile and aircraft industries

Alcoa, a leading supplier to the automobile and aircraft industries, has commissioned ANDRITZ to supply an annealing and pre-treatment line, including the entire mechanical equipment and chemical treatment part, for the Davenport works in Iowa, USA. With this plant, Alcoa will produce 100,000 t of aluminum strip for use in the automobile and aircraft industries.

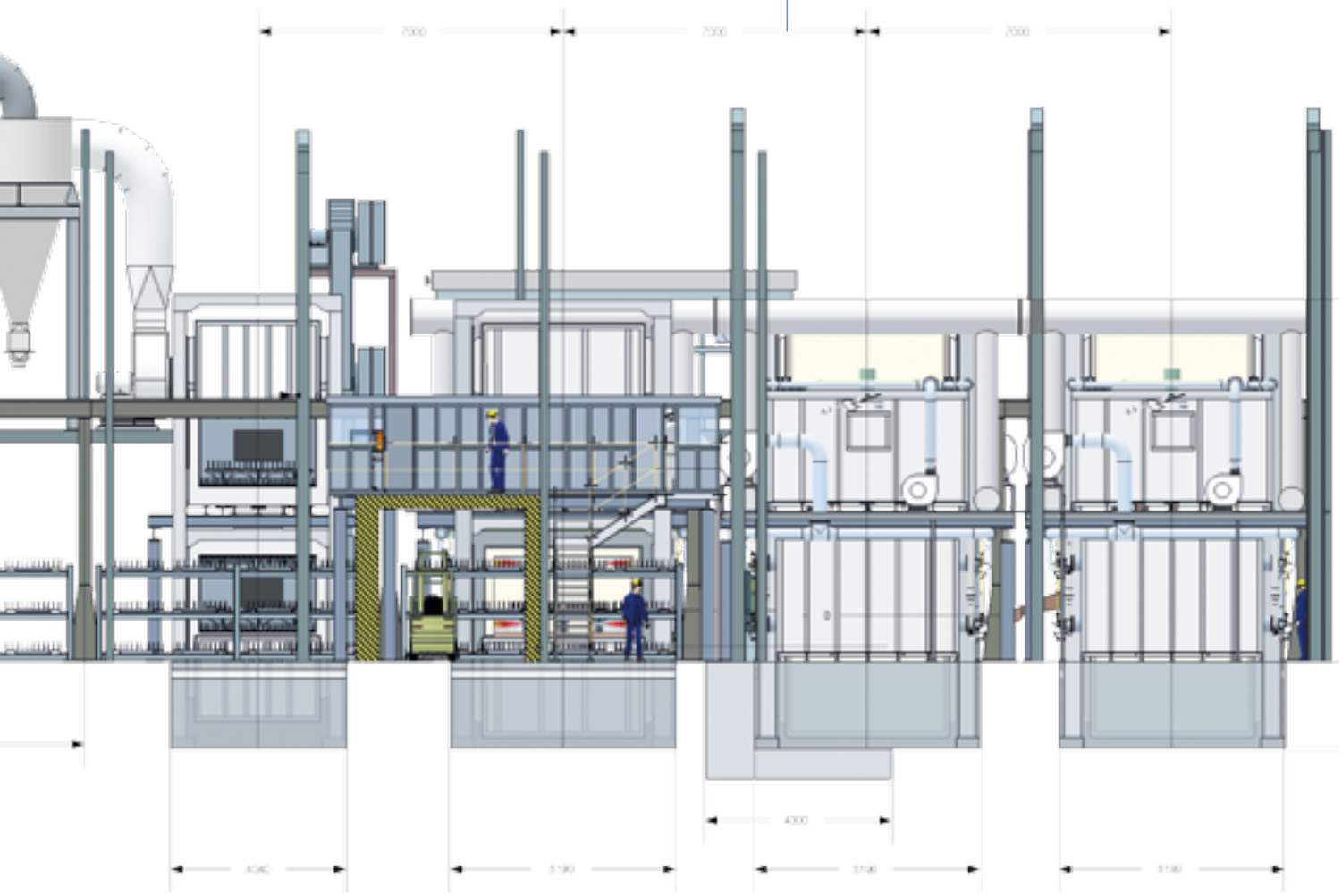
Buderus orders an energy-efficient heat-treatment plant

Buderus, Germany, commissioned the business area to supply a heat-treatment plant for the drop forge in Wetzlar, Germany. The twin-chamber furnace plant is designed for different requirements, such as heat treatment, hardening, annealing, as well as BG-annealing (annealing to obtain a certain microstructure).

The supply comprises furnaces for different temperature applications, hardening and cooling equipment, material monitoring, the complete, fully automatic handling system, and the storage system for castings. Each batch undergoes heat treatment and hardening, with traceability for each individual batch at identical heating, holding, and cooling times.

The decisive factors in the award of the order were mainly the high energy efficiency and the flexibility of the ANDRITZ plant in the handling and heat treatment sections. With this order, ANDRITZ was able to extend its leadership in the market for complex heat treatment lines in drop forges.

An energy-efficient steel heat-treatment plant will be delivered to Buderus' drop forge in Wetzlar, Germany.



The new annealing and pickling plant for Zhangjiagang Pohang Stainless Steel, China, has gone into operation two-and-a-half months ahead of schedule. The plant will produce up to 435,000 t of stainless steel strip annually.

Jindal South West modernizes continuous pickling plant in India

ANDRITZ METALS is to modernize a continuous pickling line for Jindal South West, Ltd. (JSW) at JSW's Toranagallu works, India. The entire looper and parts of the coil inlet will be replaced during this project. JSW also commissioned the business area to build an acid regeneration plant, the second plant of its kind to be supplied to JSW.

Additionally, ANDRITZ received orders to supply seven acid regeneration plants for the recovery of hydrochloric acid and a Pyromars plant for the regeneration of mixed acid from a stainless steel pickling plant.

Modernization of a furnace plant at the world's largest production location for packaging steel

The automation and drive technology of continuous annealing furnace 3 in Andernach, Germany, is to be renovated and modernized by the business area on behalf of Rasselstein GmbH, a subsidiary of ThyssenKrupp Steel Europe. Rasselstein is the only producer of tinplate in Germany. In Andernach, the world's largest production site for packaging steel, tin-coated and special chromium-coated blackplate is manufactured for many different packaging solutions, e.g. food cans.

Start-up of new annealing and pickling lines in stainless steel works in China and Malaysia

The new annealing and pickling plant for Zhangjiagang Pohang Stainless Steel Co. Ltd. (ZPSS), China, has gone into operation two-and-a-half months ahead of schedule. The delivery comprised the mechanical equipment for the inlet and outlet assemblies, the degreasing section, the annealing furnace, a skin-pass mill, a tension leveler unit, and the complete electrical and automation equipment. The plant will produce up to 435,000 t of stainless steel strip annually.

At the stainless steel works operated by Bahru Stainless, Malaysia, an annealing and pickling line for hot and cold rolled strip also went into operation successfully. The order from a joint venture company of Acerinox S.A., Spain, and Nisshin Steel, Japan, included the complete line, with strip run mechanics, furnace, pickling line, welding machine, blast cleaner, electrical equipment, automation, as well as acid regeneration and wastewater plant. The line will anneal and pickle 540,000 t of stainless steel strip annually.

ThyssenKrupp starts up new inline rolling mill

The inline rolling mill supplied to ThyssenKrupp Acciai Speciali Terni S.p.A., Italy, designed for an annual production of 700,000 t of hot-rolled stainless steel, went into operation successfully. With this extension to the existing annealing and pickling line, hot-rolled strip can be changed in shape before the first annealing stage by up to 46%, depending on the inlet thickness. This results in considerable cost and time savings in the subsequent cold rolling process.

Further important orders and events

Country	Customer	Scope of supply/project description
Austria	Böhler Edelstahl GmbH & Co. KG	New car bottom forging furnace; supply of two chamber furnaces; rebuild of a roller hearth furnace
Austria	Böhler Schmiedetechnik GmbH & Co. KG	Car bottom furnace with cooling chamber
Austria	AMAG rolling GmbH	Extension to the aluminum annealing line by adding cleaning system and vertical coater
Austria	Böhler Bleche GmbH	Car bottom furnace
Belgium	Metallo Chimique	Copper rotary furnace with a capacity of 200 t
Belgium	Antwerp Decoil Center	Start-up of a cut-to-length line
China	Wuhan Iron and Steel Co.	Start-up of the processing section of an electro-galvanizing line (300,000 t annual capacity)
China	Tianjin Rolling One Stee Co. Ltd.	Start-up of a push-pickling line and an acid regeneration plant
China	Baosteel	Start-up of a cut-to-length line
Czech Republic	Bonatrans	Start-up of a hardening and tempering plant for railway wheels
Denmark	DanSteel A/S	Modernization of a pusher-type furnace built in 1961
Germany	ThyssenKrupp Steel Europe AG	Rebuild of a pusher-type furnace
Germany	Deutsche Edelstahlwerke GmbH	Modernization of a walking hearth furnace
Germany	AG der Dillinger Hüttenwerke	Modernization of the mechanical parts and heating of pusher-type furnace 3
Germany	BUTTING GmbH & Co. KG	Travelling hood for a hood-type furnace
Germany	RMA Rheingau GmbH & Co. KG	Supply of a car bottom furnace
Germany	V&M Deutschland GmbH	Modernization of a rotary hearth furnace
Germany	Slawinski & Co. GmbH	Batch furnace heat treatment plant
Germany	ThyssenKrupp Nirosta	Refurbishment of a thin strip casting plant at the Krefeld works
Germany	Ferdinand von Hagen Söhne & Koch GmbH & Co. KG	Start-up of a servo-press weighing 800 t
Germany	Elring Klinger AG	1,500 t press with servo-drive for the production of cylinder head gaskets for the car industry
Germany	Saarschmiede GmbH	Start-up of 21 annealing furnaces, supplied for the new Saar Forge
Japan	Steel Plantech	Pickling line for a China Steel Sumikin steel works, Vietnam
India	MET-TECH	Supply of a rotary furnace
Russia	JSC Rosskat	Two copper tilting furnace plants (each with a capacity of 75 t)
Slovenia	Metal Ravne D.O.O	Two new car bottom furnaces
Turkey	Erdemir	Rebuild of a pusher-type furnace

Both business development and market environment in our sector were **satisfactory** in the last business year. Investment activity in the **animal feed, aquatic feed, and pet food** areas saw a favorable development, particularly in Asia, South America, and Europe. The market for plants producing **pellets from wood and other biomass raw materials** showed a solid project activity, especially in Europe, North America, and the emerging markets. All in all, we were able to maintain our position as one of the leading suppliers of equipment for animal feed and biomass pelleting.

Manager of the FEED & BIOFUEL business area
Jari Ålgars

The largest wood pelleting plants of the world

The largest wood pelleting plant in North America, located in Waycross, Georgia, was started up successfully in 2011. The business area delivered a complete wood pelleting plant with an annual capacity of 750,000 t – including woodyard, debarking lines, chip handling system, hammer mills, pellet mills, as well as final pellet cooling and train-outloading section – to RWE Innogy, the renewable energy company of German RWE Group. This investment is part of RWE's growth strategy, which is based largely on reducing CO_2 emissions by extending the use of renewable energy sources. For the pulp and paper producer Vyborgskaja Cellulosa, ANDRITZ FEED & BIOFUEL supplied the entire process equipment for a complete wood pelleting plant in Vyborg, Russia, which will be the largest in the world with an annual production capacity of approximately 900,000 t. The start-up is underway.

Further major orders for wood and straw pelleting plants

In the biomass pelleting plant sector, the business area recorded several important orders during the reporting period. For example, ANDRITZ will supply a pelleting plant for straw with an annual capacity of 25,000 t and equipment for a new wood pelleting plant with a capacity of 50,000 t/a to various customers in Eastern Europe. ANDRITZ is the world market

leader for plants, machinery, and services for the industrial production of biomass pellets. More than half of all biomass pellets worldwide are produced using ANDRITZ technology.

Numerous major orders to supply feed production plants

In the feed sector, the business area received numerous important orders for the supply of animal feed processing lines in Eastern Europe, South America, and Asia. These include an animal feed premix plant in Poland, a dairy feed pelleting line in India, as well as production lines for the South American poultry industry. A customer in Brazil ordered a pet food processing line with an annual capacity of 40,000 t. The business area will supply an aquatic feed plant on an EPC basis to Costa Rica for the joint venture company of BioMar Group, Denmark, and Aquacorporación Internacional SA, Costa Rica. The plant is designed for an annual production of 50,000 t of feed for tilapia and other fish species living in warmer waters.

Successful capacity increase for EWOS Scotland's aqua feed plant

The business area started up an aqua feed extrusion line for EWOS Scotland, increasing the capacity of the existing line from 8-10 t/h up to 16-19 t/h. EWOS is one of the leading suppliers of aqua feed, producing fish feed in all four of the world's major salmon farming regions (Canada, Chile, Norway, and Scotland).

Expansion of renewable energy: The largest wood pelleting plant in North America was started up successfully on behalf of RWE Innogy, the renewable energy company of German RWE Group.

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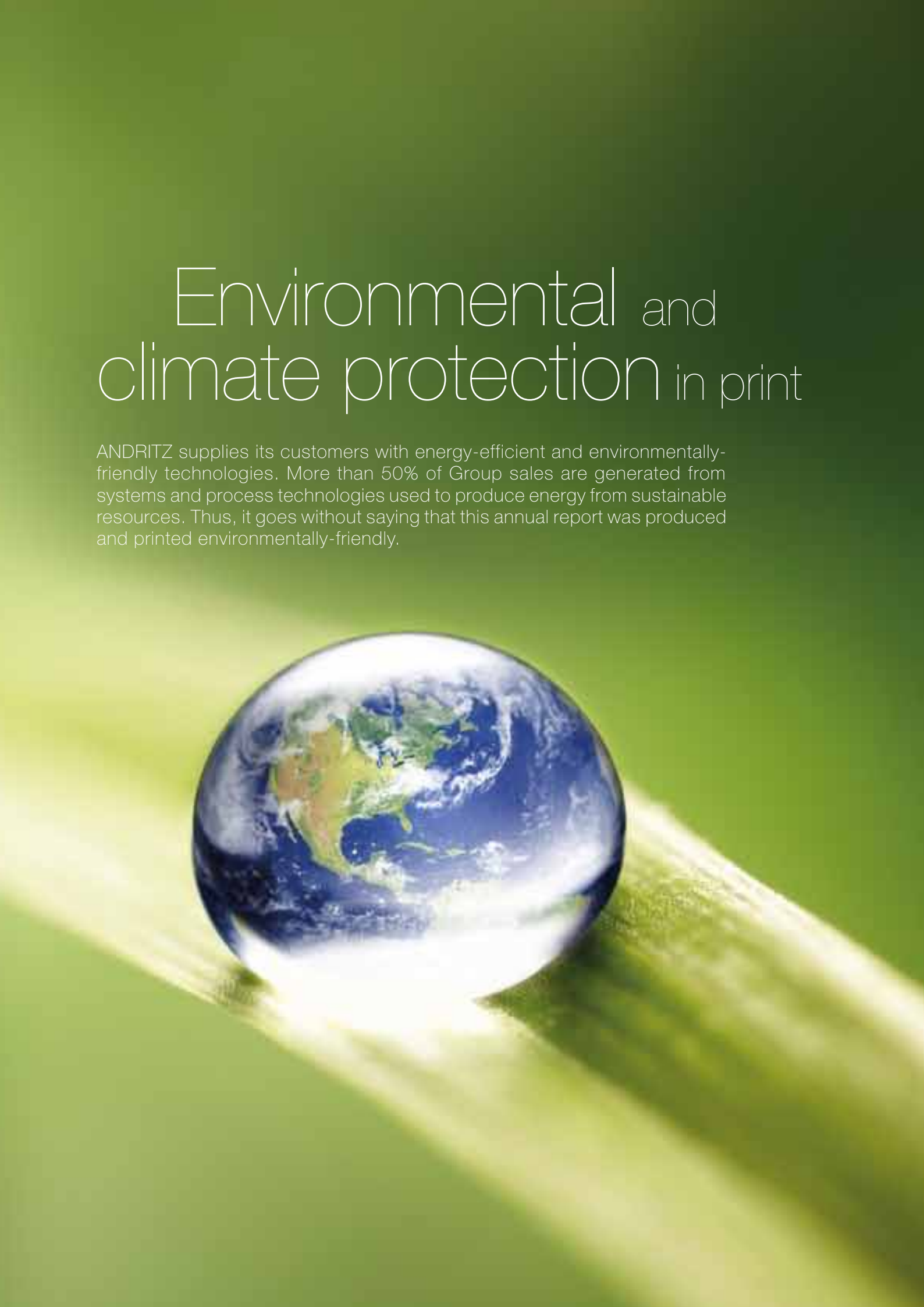
Environmental and climate protection in print

ANDRITZ supplies its customers with energy-efficient and environmentally-friendly technologies. More than 50% of Group sales are generated from systems and process technologies used to produce energy from sustainable resources. Thus, it goes without saying that this annual report was produced and printed environmentally-friendly.



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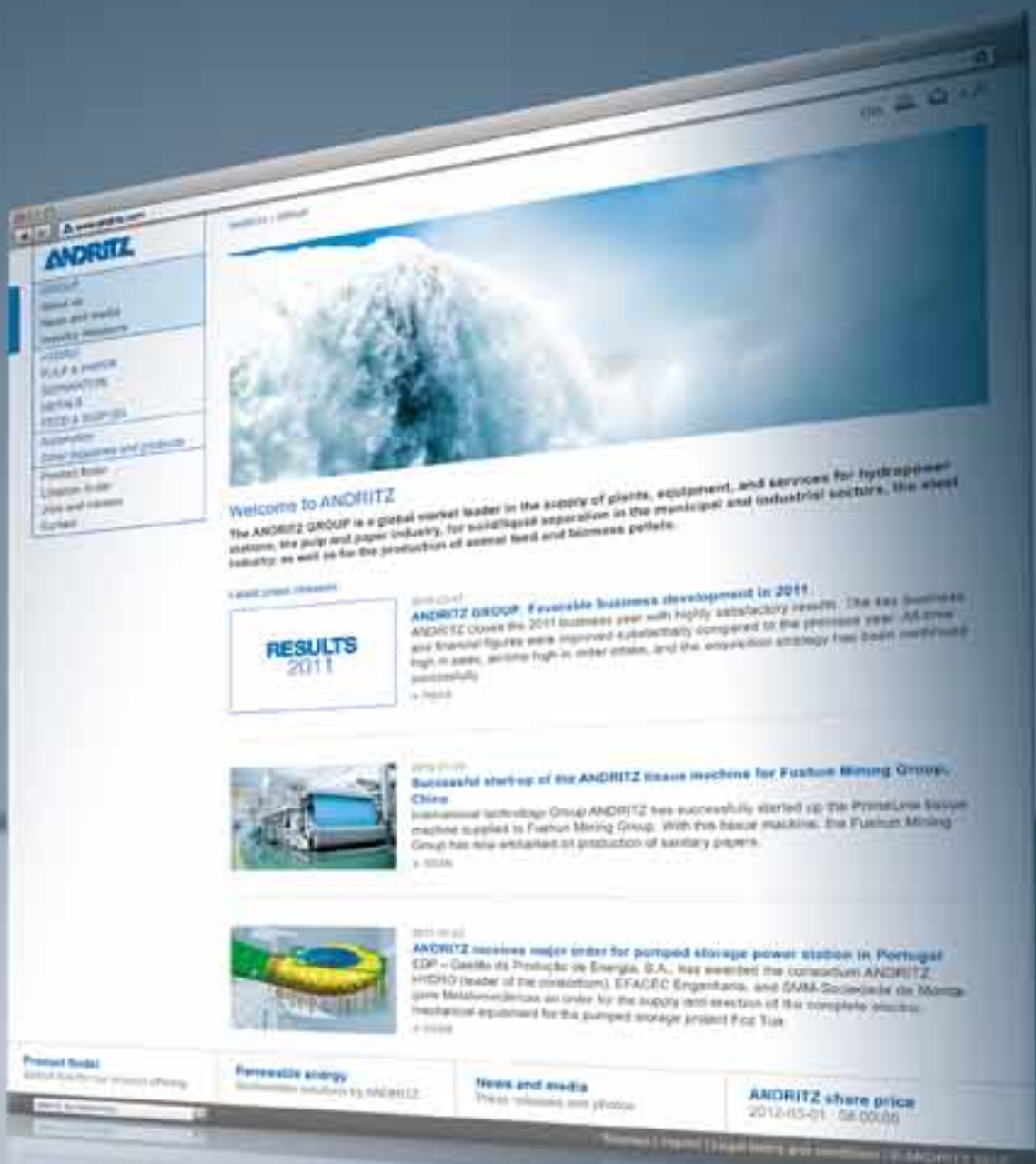
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