

ANDRITZ FINANCIAL REPORT
2019

2019



ENGINEERED SUCCESS

Key financial figures at a glance

ANDRITZ GROUP	02
Business areas	03

Management report	04
-------------------	----

Consolidated Corporate Governance report	53
---	----

Report of the Supervisory Board	66
---------------------------------	----

Consolidated financial statements 2019 of the ANDRITZ GROUP

Consolidated income statement	69
Consolidated statement of comprehensive income	70
Consolidated statement of financial position	71
Consolidated statement of cash flows	72
Consolidated statement of changes in equity	74
Notes to the consolidated financial statements	75
Statement by the Executive Board, pursuant to section 124 (1) of the (Austrian) Stock Exchange Act	154
Glossary	155
Auditor's report	157

GRI index	162
-----------	-----

CSR data overview	167
-------------------	-----

KEY FINANCIAL FIGURES OF THE ANDRITZ GROUP

	Unit	2019	2018	2017	2016	2015
Order intake	MEUR	7,282.0	6,646.2	5,579.5	5,568.8	6,017.7
Order backlog (as of end of period)	MEUR	7,777.6	7,084.3	6,383.0	6,789.2	7,324.2
Sales	MEUR	6,673.9	6,031.5	5,889.1	6,039.0	6,377.2
Return on sales	%	3.6	5.3	6.8	6.4	5.8
EBITDA	MEUR	537.6	498.0	541.7	542.4	534.7
EBITA ¹⁾	MEUR	343.2	394.3	444.0	442.1	429.0
Earnings Before Interest and Taxes (EBIT)	MEUR	237.9	321.6	399.3	385.8	369.1
Earnings Before Taxes (EBT)	MEUR	180.9	304.2	400.6	398.4	376.4
Net income (including non-controlling interests)	MEUR	122.8	219.7	265.6	274.8	270.4
Net income (without non-controlling interests)	MEUR	127.8	222.0	263.0	274.6	267.7
Cash flow from operating activities	MEUR	821.6	7.8	246.5	366.6	179.4
Capital expenditure	MEUR	157.1	137.0	116.8	119.5	101.4
Free cash flow	MEUR	664.5	-129.2	129.7	263.7	85.0
Free cash flow per share	EUR	6.4	-1.2	1.2	2.5	0.8
Employees (as of end of period; without apprentices)	-	29,513	29,096	25,566	25,162	24,508
Non-current assets	MEUR	2,705.5	2,629.5	1,860.8	1,913.7	1,844.7
Current assets	MEUR	4,528.6	4,289.1	4,404.5	4,284.9	3,933.3
Total shareholders' equity	MEUR	1,219.6	1,330.8	1,325.4	1,344.2	1,215.6
Provisions	MEUR	1,083.1	1,017.7	1,066.1	1,118.9	1,130.4
Liabilities	MEUR	4,931.4	4,570.1	3,873.8	3,735.5	3,432.0
Total assets	MEUR	7,234.1	6,918.6	6,265.3	6,198.6	5,778.0
Equity ratio	%	16.9	19.2	21.2	21.7	21.0
Return on equity	%	14.8	22.9	30.2	29.6	31.0
Return on investment	%	3.3	4.6	6.4	6.2	6.4
Liquid funds	MEUR	1,609.8	1,279.7	1,772.3	1,507.1	1,449.4
Net liquidity	MEUR	244.9	-99.6	908.0	945.3	984.0
Net debt	MEUR	205.7	568.1	-530.6	-550.2	-601.6
Net working capital	MEUR	-134.0	160.5	-121.0	-215.8	-182.1
Capital employed	MEUR	1,470.4	1,665.6	801.9	772.2	736.7
Gearing	%	16.9	42.7	-40.0	-40.9	-49.5
EBITDA margin	%	8.1	8.3	9.2	9.0	8.4
EBITA margin	%	5.1	6.5	7.5	7.3	6.7
EBIT margin	%	3.6	5.3	6.8	6.4	5.8
Net income/sales	%	1.8	3.6	4.5	4.6	4.2
ROE	%	10.1	16.5	20.0	20.4	22.2
EV/EBITDA	-	7.0	8.6	7.4	7.4	6.9
Depreciation and amortization/sales	%	4.1	2.7	2.3	2.4	2.4

1) Identifiable assets acquired in a business combination and recognized separately from goodwill amount to of 76.2 MEUR (2018: 56.8 MEUR); impairment of goodwill amounts to 29.1 MEUR (2018: 15.9 MEUR).

All figures according to IFRS. Due to the utilization of automatic calculation programs, differences can arise in the addition of rounded totals and percentages.

KEY FINANCIAL FIGURES OF THE BUSINESS AREAS

Pulp & Paper

	Unit	2019	2018	2017	2016	2015
Order intake	MEUR	3,632.5	2,571.9	2,033.4	1,919.5	2,263.9
Order backlog (as of end of period)	MEUR	3,164.3	2,421.1	1,787.0	1,803.3	1,998.6
Sales	MEUR	2,869.5	2,233.2	2,059.7	2,094.4	2,196.3
EBITDA	MEUR	351.4	258.4	221.5	207.7	214.8
EBITDA margin	%	12.2	11.6	10.8	9.9	9.8
EBITA	MEUR	271.0	222.1	194.9	182.2	190.9
EBITA margin	%	9.4	9.9	9.5	8.7	8.7
Capital expenditure	MEUR	63.3	33.8	42.1	34.1	21.1
Employees (as of end of period; without apprentices)	-	11,984	11,435	8,002	7,522	7,324

Metals

	Unit	2019	2018	2017	2016	2015
Order intake	MEUR	1,582.2	1,931.8	1,606.5	1,551.5	1,438.6
Order backlog (as of end of period)	MEUR	1,532.7	1,591.6	1,309.7	1,369.0	1,332.5
Sales	MEUR	1,636.9	1,635.1	1,643.5	1,598.4	1,718.1
EBITDA	MEUR	-1.5	57.8	129.7	141.7	104.8
EBITDA margin	%	-0.1	3.5	7.9	8.9	6.1
EBITA	MEUR	-73.8	27.3	98.6	115.2	70.5
EBITA margin	%	-4.5	1.7	6.0	7.2	4.1
Capital expenditure	MEUR	30.8	36.1	29.7	49.1	40.2
Employees (as of end of period; without apprentices)	-	7,485	7,818	7,573	7,608	6,160

Hydro

	Unit	2019	2018	2017	2016	2015
Order intake	MEUR	1,350.2	1,445.8	1,317.2	1,500.3	1,718.7
Order backlog (as of end of period)	MEUR	2,661.0	2,667.9	2,921.8	3,269.6	3,640.9
Sales	MEUR	1,470.7	1,517.5	1,583.1	1,752.4	1,834.8
EBITDA	MEUR	134.1	142.4	154.1	167.2	183.6
EBITDA margin	%	9.1	9.4	9.7	9.5	10.0
EBITA	MEUR	105.9	113.8	123.0	127.6	145.3
EBITA margin	%	7.2	7.5	7.8	7.3	7.9
Capital expenditure	MEUR	51.8	57.9	36.3	26.1	27.4
Employees (as of end of period; without apprentices)	-	7,202	7,002	7,237	7,260	8,230

Separation

	Unit	2019	2018	2017	2016	2015
Order intake	MEUR	717.1	696.7	622.4	597.5	596.5
Order backlog (as of end of period)	MEUR	419.6	403.7	364.5	347.3	352.2
Sales	MEUR	696.8	645.7	602.8	593.8	628.0
EBITDA	MEUR	53.6	39.4	36.4	25.8	31.5
EBITDA margin	%	7.7	6.1	6.0	4.3	5.0
EBITA	MEUR	40.1	31.1	27.5	17.1	22.3
EBITA margin	%	5.8	4.8	4.6	2.9	3.6
Capital expenditure	MEUR	11.2	9.2	8.7	10.2	12.7
Employees (as of end of period; without apprentices)	-	2,842	2,841	2,754	2,772	2,794

MANAGEMENT REPORT

GENERAL ECONOMIC CONDITIONS

The 2019 business year was marked by the slowdown of the global economy. Economic growth fell to 2.9% (2018: 3.6%) and was thus weaker than it has been at any time since the financial crisis. The main reasons for this are the trade disputes between the three large economic regions – the USA, China and Europe, the weak economies in some emerging markets, as well as the UK's impending exit from the European Union.

In the USA, economic growth dropped to 2.3% (2018: 2.9%) in the reporting year. As in the previous years, private consumption, which accounts for approximately 70% of the annual economic output, was the main pillar supporting the economy. The export industry suffered under the unfavorable international economic environment and the strength of the US dollar. Nevertheless, the unemployment rate remained at an unchanged low level of 3.7% as of the end of 2019. The US Federal Reserve (FED) lowered the key interest rate three times in 2019 to a range between 1.5 and 1.75% in order to support the US economy.

Growth also slowed down significantly in the euro zone (GDP growth 2019: 1.2% versus 1.9% in 2018). A negative impact came from industrial production, which has been declining since the beginning of the year due to trade disputes, the weak automotive sector, and the UK's impending exit from the European Union. The European Central Bank (ECB) left the key interest rate at its record low of 0.0% in 2019.

The economy in the most important emerging markets also weakened during the reporting period. China continues to suffer from the consequences of the continuing trade dispute with the USA. Growth declined considerably to 6.1% (2018: 6.6%), industrial production fell, and the profits of Chinese industrial companies dropped. As a result of the increasing prosperity in China, private consumption has become more and more an important pillar of the economy there. Due to the economic slowdown, the People's Bank of China lowered the interest rate for short-term loans for the first time in over four years in order to stimulate capital expenditure and private consumption. The economies in Russia and Brazil also saw only moderate development.

Source: Research reports by various banks, OECD

MARKET DEVELOPMENT

Pulp & Paper

The international pulp market weakened in 2019 compared to the previous year. The overall decline in demand for pulp – especially in China – as a result of the economic environment led to a surplus in the supply of pulp and thus to an increase in global pulp inventories. As a result, the price for short-fiber pulp (eucalyptus) decreased from around 1,030 USD per ton at the beginning of the year to approximately 680 USD per ton at the end of 2019. The price of NBSK (Northern Bleached Softwood Kraft Pulp) long-fiber pulp also fell from around 1,200 USD per ton at the end of December 2018 to approximately 820 USD per ton at the end of December 2019.

In spite of the weaker market development, there was very good project activity for pulping equipment during the reporting period – both for modernization of existing pulp mills and for the construction of new plants (especially in South America). In the power boiler sector, the very good project and investment activity of the previous year continued, particularly in Asia (Japan). The service sector also saw very good demand.

Metals

In the Metals Forming sector for the automotive and automotive supplying industries (Schuler), project and investment activity was weak and declined further compared to the previous year during the reporting period. Due to the continuing weak international automotive market, there were only a few larger investments made by car manufacturers and their suppliers.

Project activity for equipment for the production and processing of stainless steel strip, carbon steel strip, and aluminum strip (Metals Processing) was impacted by a sharply declining demand in all core markets during the reporting year. The orders placed focused mainly on technologies and plants for the production of advanced high-strength steel grades (AHSS) and of aluminum for applications in the automotive industry.

There was unchanged fierce competition during the reporting period both in Metals Forming and in Metals Processing.

Hydro

Global investment and project activity for electromechanical equipment for hydropower plants continued at a moderate level during the 2019 business year. As a result of the continuing low investment activities by utilities – due to the low electricity prices - many modernization and rehabilitation projects for hydropower stations are still postponed, particularly in Europe, or have been stopped until further notice. Orders to supply equipment for new hydropower plants were only awarded selectively during the reporting period, particularly in the growth market Asia. Good project activity was noted in the pumps sector.

Separation

The global markets for solid/liquid separation equipment developed satisfactorily during the 2019 business year. In particular, the environmental (municipal and industrial sewage sludge dewatering and drying), mining, and chemical sectors showed good project activity. Investment activity in the food industry improved slightly from a low level. Satisfactory project activity was noted in the feed technologies sector.

BUSINESS DEVELOPMENT

Change in the Consolidation Group

Information on the consolidation scope can be found in the notes to the consolidated financial statements, chapter B) 4. Consolidation scope.

Sales

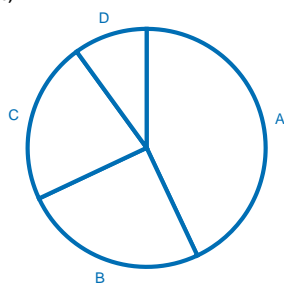
Sales of the ANDRITZ GROUP amounted to 6,673.9 MEUR in the 2019 business year and, like order intake, reached a new record figure (+10.7% versus 2018: 6,031.5 MEUR). This increase is mainly attributable to the Pulp & Paper business area, where sales increased significantly (+28.5%) compared to the previous year. Both the Capital and Service segments recorded a significant increase in sales due to favorable development of order intake in the past few quarters. Xerium Technologies, Inc., which has been consolidated since October 2018, contributed around 446 MEUR (2018: 106 MEUR) to the sales figure. The Separation business area also saw an increase in sales (+7.9%) due to the positive development of order intake in the previous year. Sales in the Metals business area remained practically at the same level as the previous year (+0.1%). The Hydro business area saw a slight drop in sales (-3.1%) due to the decline in order intake in the past few years.

The business areas' sales development at a glance:

	Unit	2019	2018	+/-
Pulp & Paper	MEUR	2,869.5	2,233.2	+28.5%
Metals	MEUR	1,636.9	1,635.1	+0.1%
Hydro	MEUR	1,470.7	1,517.5	-3.1%
Separation	MEUR	696.8	645.7	+7.9%

Sales by business area
2019 in %

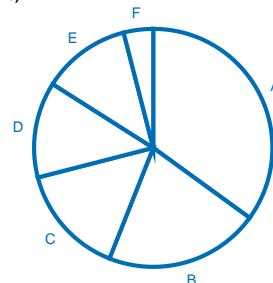
(2018)



A	43	(37)	Pulp & Paper
B	25	(27)	Metals
C	22	(25)	Hydro
D	10	(11)	Separation

Sales by region
2019 in %

(2018)



A	35	(39)	Europe
B	21	(20)	North America
C	15	(15)	China
D	13	(14)	Asia (without China)
E	12	(8)	South America
F	4	(4)	Africa, Australia

Share of service sales of Group and business area sales in %

	2019	2018
ANDRITZ GROUP	40	36
Pulp & Paper	51	48
Metals	27	23
Hydro	32	28
Separation	45	45

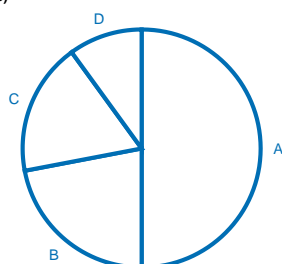
Order intake

The order intake of the Group developed very favorably in the 2019 business year – driven above all by the very positive development in the Pulp & Paper business area – and reached a record level of 7,282.0 MEUR (+9.6% versus 2018: 6,646.2 MEUR). The business areas' development in detail:

- Pulp & Paper: Order intake at 3,632.5 MEUR, reached a new peak level and was thus 41.2% higher than the figure for the previous year's reference period (2018: 2,571.9 MEUR). This strong increase is primarily attributable to the award of some large-scale orders to build new pulp mills in South America (Brazil). Service business also saw a very favorable development, with Xerium Technologies, Inc. contributing around 465 MEUR (2018: 118 MEUR) to the order intake following its first-time consolidation in October 2018.
- Metals: In a market environment characterized by intense competition and subdued project activity, the order intake at 1,582.2 MEUR was significantly below the high level of the previous year's reference period (-18.1% versus 2018: 1,931.8 MEUR), which included some large and medium-sized orders in Metals Processing. Both the Metals Forming (Schuler) – due to the continuing weakness of the international automotive market – and the Metals Processing sector showed a significant decline in order intake compared to the previous year.
- Hydro: The global market for hydropower equipment noticed an unchanged moderate development once again in 2019. In this environment, the business area achieved a slightly lower order intake of 1,350.2 MEUR (-6.6% versus 2018: 1,445.8 MEUR) compared to the previous year.
- Separation: Order intake amounted to 717.1 MEUR and was thus 2.9% higher than the level for the previous year's reference period (2018: 696.7 MEUR), which included a large-scale order. The order intake increased slightly both in the solid/liquid separation and the feed technologies sectors compared to the previous year.

Order intake by business area 2019 in %

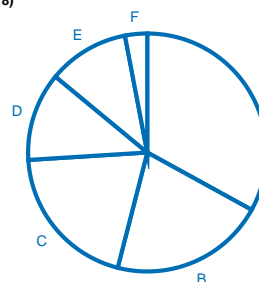
(2018)



A	50 (39)	Pulp & Paper
B	22 (29)	Metals
C	18 (22)	Hydro
D	10 (10)	Separation

Order intake by region 2019 in %

(2018)



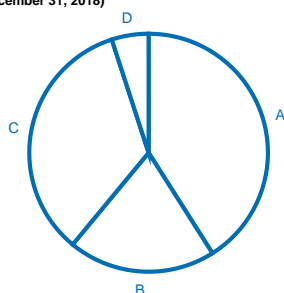
A	33 (35)	Europe
B	21 (17)	North America
C	20 (10)	South America
D	12 (15)	Asia (without China)
E	11 (18)	China
F	3 (5)	Africa, Australia

Order backlog

As of December 31, 2019, the order backlog of the ANDRITZ GROUP amounted to 7,777.6 MEUR (+9.8% versus December 31, 2018: 7,084.3 MEUR).

Order backlog by business area as of December 31, 2019 in %

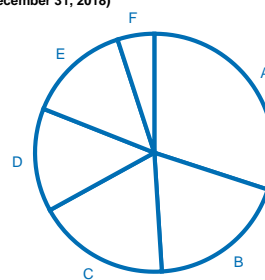
(December 31, 2018)



A	41 (34)	Pulp & Paper
B	20 (22)	Metals
C	34 (38)	Hydro
D	5 (6)	Separation

Order backlog by region as of December 31, 2019 in %

(December 31, 2018)



A	30 (33)	Europe
B	19 (13)	North America
C	18 (19)	Asia (without China)
D	14 (11)	South America
E	14 (18)	China
F	5 (6)	Africa, Australia

Earnings

In 2019, earnings development of the Group was negatively impacted particularly due to measures for capacity adjustments totaling 113 MEUR (82 MEUR thereof for the Metals business area) and to processing of lower-margin orders (particularly in the Metals business area). As a result, the Group's EBITA of 343.2 MEUR was significantly lower than the reference figure for the previous year (-13.0% versus 2018: 394.3 MEUR). Profitability (EBITA margin) also dropped substantially to 5.1% (2018: 6.5%).

Excluding these measures, the Group's EBITA amounted to 456.0 MEUR. The adjusted EBITA margin amounts to 6.8% and thus remained at the same level as the previous year's adjusted reference figure (2018: 6.9%).

Development of profitability by business area:

- In the Pulp & Paper business area, the EBITA margin at 9.4% again reached a very favorable level (2018: 9.9%). The slight decline in profitability compared to the record figure for the previous year is due to a higher share of sales for large-scale projects in the Capital sector on the one hand and to minor capacity adjustment measures in individual areas of the business area on the other hand. The adjusted EBITA margin remained at an unchanged high level of 9.8%.
- Profitability of the Metals business area was clearly negative at -4.5% (2018: 1.7%), mainly due to the above mentioned measures in Metals Forming. In addition, processing of lower-margin orders as a result of the unchanged strong competition and cost overruns on individual projects in Metals Processing had a negative impact on the development of earnings and profitability. Excluding adjustments for restructuring expenses, the EBITA margin amounted to 0.5%.
- The EBITA margin in the Hydro business area remained at a solid level of 7.2% (2018: 7.5%) despite a decline in sales and booking of measures for minor capacity adjustments. The adjusted EBITA margin amounted 8.1%.
- In the Separation business area, the EBITA margin increased to 5.8% (2018: 4.8%). The adjusted EBITA margin increased to 6.6%.

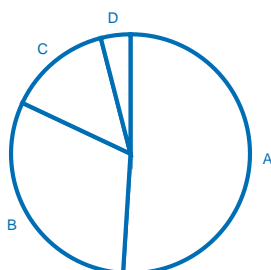
Consolidated income statement

(in MEUR)	2019	2018	+/-
Sales	6,673.9	6,031.5	+10.7%
Changes in inventories of finished goods, work in progress and capitalized cost of self-constructed assets	-28.2	-1.5	-1,780.0%
Other operating income	96.2	89.3	+7.7%
Cost of materials	-3,305.2	-2,987.7	-10.6%
Personnel expenses	-2,015.2	-1,787.0	-12.8%
Other operating expenses	-883.9	-846.6	-4.4%
EBITDA	537.6	498.0	+8.0%
Depreciation, amortization, and impairment of intangible assets and of property, plant, and equipment	-270.6	-160.5	-68.6%
Impairment of goodwill	-29.1	-15.9	-83.0%
EBIT	237.9	321.6	-26.0%
Financial result	-57.0	-17.4	-227.6%
EBT	180.9	304.2	-40.5%
Income taxes	-58.2	-84.5	+31.1%
NET INCOME	122.8	219.7	-44.1%
Thereof attributable to:			
Shareholders of the parent	127.8	222.0	-42.4%
Non-controlling interests	-5.0	-2.3	-117.4%
Basic earnings per no-par value share (in EUR)	1.27	2.20	-42.3%

Allocation of expenses in %

Distribution of total expenses
2019 in %

(2018)



A	51	(52)	Cost of materials
B	31	(31)	Personnel expenses
C	14	(14)	Other operating expenses
D	4	(3)	Depreciation

51.0% of total operating expenses were attributable to material expenses in 2019 (2018: 51.7%). The material expenses to sales ratio amounted to 49.5% (2018: 49.5%). The share of personnel expenses, at 31.1%, was thus practically unchanged compared to the previous year's reference period (2018: 30.9%), the personnel expenses to sales ratio amounted to 30.2% (2018: 29.6%).

Other operating expenses amounted to 883.9 MEUR in the reporting period (2018: 846.4 MEUR) and mainly include sales expenses, travel expenses, repairs and maintenance, as well as legal, consulting, and audit expenses. Other operating income, at 96.2 MEUR, was above the level for the previous year (2018: 89.3 MEUR) and mainly includes government grants, insurance income, and profits on disposal of intangible assets and property, plant, and equipment.

The depreciation and amortization of intangible assets and of property, plant, and equipment amounted to 270.6 MEUR in 2019 (2018: 160.6 MEUR). Thereof 82.5 MEUR (2018: 58.6 MEUR) are attributable to depreciation and amortization of intangible assets and 168.7 MEUR (2018: 96.4 MEUR) to depreciation and amortization of property, plant, and equipment. The increase in depreciation is mainly attributable to Xerium Technologies, Inc., which was included in the consolidated financial statements throughout 2019 as well as the first-time application of IFRS 16 (Leases).

In 2019, the Group's goodwill impairment amounted to 29.1 MEUR (2018: 15.9 MEUR), and the impairment charges for intangible and tangible assets were 19.4 MEUR (2018: 5.6 MEUR). The goodwill impairment relates to the Metals business area, where the business did not develop as expected. Impairment of intangible and tangible assets mainly relates to plant, technical installations, and equipment.

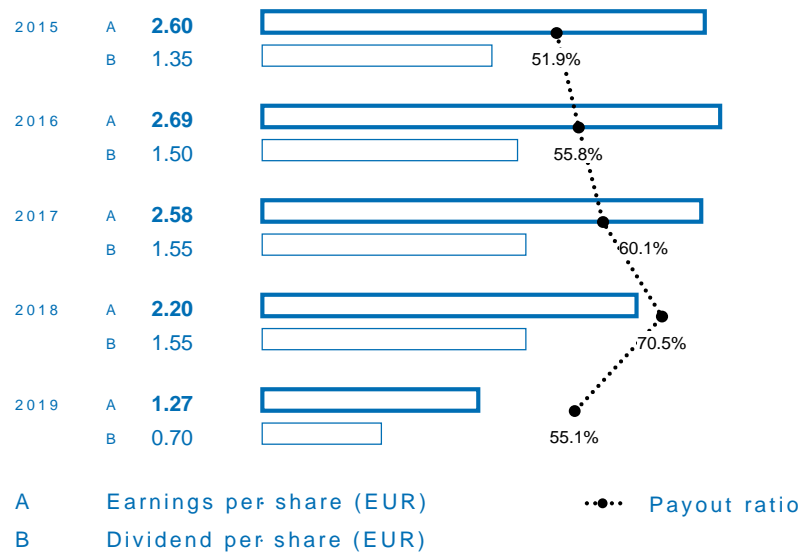
The financial result decreased significantly to -57.0 MEUR (2018: -17.4 MEUR). This sharp decline is largely due to an increase in interest expenses in connection with the refinancing of Xerium Technologies, Inc.'s financial liabilities as well as the issuance of a Schuldscheindarlehen (volume: 175 MEUR) in May 2019 and of an export credit loan with favorable interest rates (volume: 170 MEUR in March 2019). In addition, interest expenses increased as a result of the first-time application of IFRS 16 (Leases) required as of January 1, 2019.

The tax rate increased, among other things, due to the lower recognition of deferred tax assets on loss carryforwards to 32.1% (2018: 27.8%); see also notes to the consolidated financial statements, chapter C) 16. Income taxes.

The net income (including non-controlling interests) amounted to 122.8 MEUR (-44.1% versus 2018: 219.7 MEUR). Thereof 127.8 MEUR (2018: 222.0 MEUR) are attributable to the shareholders of the parent company and -5.1 MEUR (2018: -2.3 MEUR) to non-controlling interests (see also notes to the consolidated financial statements, chapter F) 31. Equity.

The earnings per share decreased to 1.27 EUR (2018: 2.20 EUR). At the Annual General Meeting on March 25, 2020, the Executive Board will propose a dividend of 0.70 EUR per share (2018: 1.55 EUR) for the 2019 business year. This is equal to a payout ratio of around 55.1% (2018: around 70.5%).

Earnings and dividend per share/payout ratio



Dividend for 2019: Proposal to the Annual General Meeting.

Treasury shares

As of December 31, 2019, the company held 4,132,610 treasury shares, i.e. 4.0% of the share capital, with a market value of 158.7 MEUR.

More information on treasury shares is available in the notes to the consolidated financial statements, chapter F) 31. Equity.

Net worth position and capital structure

Total assets increased – mainly due to the first-time application of IFRS 16 (Leases) – to 7,234.1 MEUR (December 31, 2018: 6,918.6 MEUR). The equity ratio amounted to 16.9% (December 31, 2018: 19.2%).

Assets

A	B	C

A	Long-term assets: 37%	2,705.5 MEUR
B	Short-term assets: 42%	3,023.8 MEUR
C	Cash and cash equivalents and marketable securities: 21%	1,504.8 MEUR

Shareholders' equity and liabilities

A	B	C	D

A	Shareholders' equity incl. non-controlling interests: 17%	1,219.6 MEUR
B	Financial liabilities: 22%	1,619.6 MEUR
C	Other long-term liabilities: 11%	796.1 MEUR
D	Other short-term liabilities: 50%	3,598.8 MEUR

On the asset side, property, plant, and equipment (1,295.2 MEUR), goodwill (776.9 MEUR), and intangible assets (309.2 MEUR) were the most important items in non-current assets (2,705.5 MEUR). The most important items in the other current assets, amounting to 3,023.8 MEUR, are trade accounts receivable and contract assets in the amount of 1,666.0 MEUR as well as inventories (842.4 MEUR).

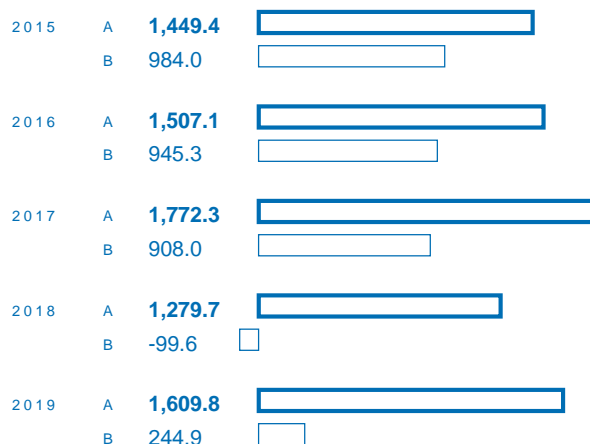
On the liabilities side, the other current liabilities (3,598.8 MEUR) mainly include contract liabilities from sales recognized over time in the amount of 1,230.3 MEUR, provisions (489.8 MEUR), and trade accounts payable (668.9 MEUR). The most important items in other liabilities (935.0 MEUR) are accruals and outstanding order-related costs (428.2 MEUR), as well as unused vacation and other personnel-related accruals (255.7 MEUR). Non-current liabilities, at 796.1 MEUR, largely contain provisions (593.3 MEUR), Lease liabilities (213.7 MEUR), and deferred tax liabilities (159.7 MEUR).

Further information on provisions is shown in the notes to the consolidated financial statements, chapter D) 22. Provisions.

Development of liquid funds and net liquidity

Liquid funds amounted to 1,609.8 MEUR (December 31, 2018: 1,279.7 MEUR), while net liquidity increased significantly to 244.9 MEUR (December 31, 2018: -99.6 MEUR).

In 2019, ANDRITZ AG issued a Schuldscheindarlehen with a volume of 175 MEUR as well as an export credit loan (volume: 170 MEUR) in order to provide funds for corporate financing (including refinancing).



A Liquid funds (MEUR)
B Net liquidity (MEUR)

In addition to the high liquid funds, the ANDRITZ GROUP also had the following credit and surety lines for performance of contracts, down payments, guarantees, and so on, at its disposal:

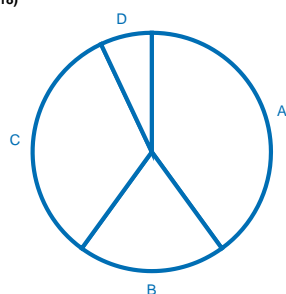
- Credit lines: 369 MEUR, thereof 280 MEUR utilized
- Surety lines: 6,063 MEUR, thereof 3,067 MEUR utilized

Capital expenditure

Investments in tangible and intangible assets amounted to 157.1 MEUR in 2019 and were thus above the previous year's level (2018: 137.0 MEUR). The increase is mainly attributable to Xerium Technologies, Inc., which has been consolidated since October 2018. Investments breakdown by business area as follows:

Capital expenditure by business area
2019 in %

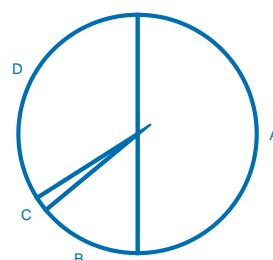
(2018)



A 40 (25) Pulp & Paper
B 20 (26) Metals
C 33 (42) Hydro
D 7 (7) Separation

Capital expenditure by category
2019 in %

(2018)



A 50 (41) Manufacturing
B 14 (12) IT
C 2 (3) Research and Development
D 34 (44) Others

As in previous years, investments mainly focused on workshop modernizations and selected extension projects.

Cash flow

The cash flow from operating activities, at 821.6 MEUR, was significantly above the previous year's reference figure (2018: 7.8 MEUR). The change is due to the increase in Gross cash flow (587.2 MEUR in 2019 versus 404.8 MEUR in 2018) as well as project related changes in net working capital (330.7 MEUR in 2019 versus -278.7 MEUR in 2018). Increased depreciation and amortization (due to the acquisition of Xerium Technologies, Inc. and the implementation of the new leasing standard) as well as measures for capacity adjustments not yet cash-effective were the main reason for the increase in gross cash flow. Net working capital increased as a result of advance and progress payments for large projects.

The cash flow from investing activities amounted to -107.9 MEUR (2018: -89.8 MEUR). The change compared to the previous year is mainly due to different amounts for payments received and payments made for financial assets as well as a significantly lower investment volume for business acquisitions.

The cash flow from financing activities amounted to -365.5 MEUR (2018: -112.2 MEUR). The change mainly resulted from redemption of a corporate bond of ANDRITZ AG (-350 MEUR in 2019 versus -427.6 MEUR because of the early redemption of a corporate bond held by Xerium Technologies, Inc. in the 2018 business year). This contrasts payments received from issuance of Schuldscheindarlehen (175.0 MEUR in 2019 versus 500.0 MEUR in 2018) and payments received from bank loans and other financial liabilities (172.6 MEUR in 2019 versus 57.8 MEUR in 2018). The increase in payments made for bank loans, other financial liabilities, and lease liabilities is due to the implementation of the new leasing standard and includes the repayment portion contained in the lease payments. In addition, payments were made to former shareholders (-79.8 MEUR in 2019 versus -0.4 MEUR in 2018), mainly for contingent consideration paid for the Chinese press and machine tool manufacturer Yangzhou Metal Forming Machine Tool Co., Ltd. (Yadon). In 2019, own shares of 39.8 MEUR were bought back (versus 4.9 MEUR in 2018).

Further important key figures at a glance

	Unit	2019	2018	2017	2016	2015
Return on sales	%	3.6	5.3	6.8	6.4	5.8
EBITDA	MEUR	537.6	498.0	541.7	542.4	534.7
Earnings Before Interest and Taxes (EBIT)	MEUR	237.9	321.6	399.3	385.8	369.1
Earnings Before Taxes (EBT)	MEUR	180.9	304.2	400.6	398.4	376.4
Net income (including non-controlling interests)	MEUR	122.8	219.7	265.6	274.8	270.4
Free cash flow	MEUR	664.5	-129.2	129.7	263.7	85.0
Free cash flow per share	EUR	6.4	-1.2	1.2	2.5	0.8
Return on equity	%	14.8	22.9	30.2	29.6	31.0
Return on investment	%	3.3	4.6	6.4	6.2	6.4
Net debt	MEUR	205.7	568.1	-530.6	-550.2	-601.6
Net working capital	MEUR	-134.0	160.5	-121.0	-215.8	-182.1
Capital employed	MEUR	1,470.4	1,665.6	801.9	772.2	736.7
Gearing	%	16.9	42.7	-40.0	-40.9	-49.5

Acquisitions

In June 2019, ANDRITZ signed a contract to acquire individual assets and liabilities of Kempulp AB, Sweden. Kempulp is a provider of chemical pulping, washing, oxygen delignification and bleaching technologies. The acquisition complements the Pulp & Paper business area's product portfolio. The closing of the transaction took place in July 2019.

Further information on acquisitions can be found in the notes to the consolidated financial statements, chapter B) 5. Acquisitions.

RISK MANAGEMENT

The ANDRITZ GROUP is a globally-operating company serving a large variety of industrial markets and customers. As such, the Group is subject to a series of risks. The main, higher-level risks pursuant to Article 243 (1) of the Austrian Commercial Code (Unternehmensgesetzbuch - UGB) include:

- Risks relating to financial instruments
- Strategic risks
- Operational risks

The active risk management implemented by the ANDRITZ GROUP for many years now serves both to safeguard the company's existence in the long term as well as to increase its value, and is thus an essential success factor for the entire Group. For the purposes of value-oriented company management, risk management is an integral part of the business processes and extends over all strategic and operative levels.

The planning and controlling process within the entire ANDRITZ GROUP is an integral part of risk monitoring and control. Continuous controlling and regular reporting are intended to increase the likelihood of identifying major risks at an early stage and to allow countermeasures to be implemented if necessary. Still, there is no guarantee that all risks are identified in time by the monitoring and risk control systems in use.

The continuing trade dispute between the USA and China has had a negative impact on the global economy for some time now. Market experts expect the global economy to weaken further in 2020 if the trade dispute continues much longer or escalates further. ANDRITZ has a strong local presence both in the USA and in China and is represented in both countries with all four business areas. From today's perspective, the effects on ANDRITZ can be considered insignificant. However, if the trade dispute escalates further, this could also have a negative impact on ANDRITZ.

The decision by the World Trade Organization (WTO) in favor of the USA's punitive tariffs on EU imports imposed due to illegal EU subsidies has further intensified the trade dispute between the European Union and the USA. It could subsequently have a more serious negative impact on the economy in Europe, and thus also on the ANDRITZ GROUP, because Europe is the most important economic region for the Group, averaging 35 to 40% of total sales. The long-term economic impact of the United Kingdom (UK) leaving the European Union also cannot be estimated yet. However, the ANDRITZ GROUP's direct business volume in the UK can be classified as very small.

The ANDRITZ GROUP risks described below are monitored continuously. ANDRITZ is prepared to react to and to counteract these risks.

Risks relating to financial instruments

The principal financial risks include payment default, liquidity risks, and market risks, such as exchange rate risks, interest rate risks, and raw material price risks.

A detailed description of all financial risks of the ANDRITZ GROUP is provided in chapter F) 33. Risk management – Risks relating to financial instruments

Strategic risks

Political risks

The countries in which the Group is active include some that are classified as politically risky or very risky. Terrorist activities or political changes could result in orders being suspended. Political developments are monitored continuously in all countries and regions in which the Group operates. Risks related to deliveries to countries with medium to high political risks are typically covered by comprehensive insurance. However, the prerequisites for full hedging of these risks are not always available. The measures and procedures in this respect are specified in the credit risk policy applying throughout the Group.

Regulatory risks

Regulatory risks include both tax risks and compliance risks.

The ANDRITZ group companies are subject to local tax laws in the respective countries and have to pay income taxes as well as other taxes. Changes in legislation or other regulations – also including regulations for import duties and so on – and different interpretations of the regulations applying in each case can result in subsequent tax burdens. As a result, the tax rate can be exposed to either positive or negative fluctuations.

The ANDRITZ GROUP is subject to a variety of legal compliance risks, including compliance with anti-trust and anti-bribery laws, in Austria and other countries where the Group conducts business. The Group has established a Compliance Committee to monitor compliance rules and adopted a number of compliance policies, including policies prohibiting insider trading and violation of the applicable anti-trust and anti-bribery laws, as well as a global Code of Business Conduct and Ethics. While the Group attempts to make sure that such policies are observed, there can be no assurance that no violations will occur. Any such violation could have a lasting adverse impact on the financial position and reputation of the Group and may also lead to the cancellation of existing orders.

Competitive position

The ANDRITZ GROUP does business in highly competitive markets in which only a few large suppliers bid for only a few large orders. In addition, there are many small companies competing locally that have a comparatively low cost base. The competitive situation or a possible change in the competition structure can have a negative effect on sales margins of the Group. The Group counteracts this risk with continuous research and development work, product innovations and constant cost optimizations. However, there is no guarantee that the Group can also maintain its current market position in the future.

As the Group's competitive position is also based on proprietary technology, the increase in product piracy and industrial espionage facilitated by the digital era and the resulting theft of intellectual property can also have an adverse effect on the Group's competitive position. The Group protects its intellectual property wherever possible, but there can be no assurance that these efforts will always be successful.

Customer concentration

In many of the industries served by the ANDRITZ GROUP, there is a trend towards consolidations and mergers. This applies above all to the pulp and paper industry and also to the steel industry. Such consolidations may result in the Group having to negotiate in the future with fewer companies, but which have greater purchasing power. Dependence on individual key customers may increase, and this could have direct consequences on the Group's business activities.

Volatility of order intake

Some customers and industries served by ANDRITZ are directly dependent on general economic developments and thus subject to frequent fluctuations in the demand for their products. This applies above all to the

Pulp & Paper and the Metals business areas, but all business areas may be affected. The prices for equipment and products supplied by ANDRITZ in these segments are, in part, directly dependent on the prevailing relationship between supply and demand for the goods produced by such equipment and products of ANDRITZ. Possible price fluctuations can, therefore, have a direct influence on each customer's capital investment decisions, with subsequent impact on the Group's order intake. This may lead to some volatility in the development of the Group's order intake.

The continuing weakness of the international automotive market could have a further negative impact on business development in Metals Forming (Schuler) because around three-quarters of Schuler's sales come from the automotive industry. Although capacitive restructuring measures have already been implemented in recent years, and a further capacity adjustment program was decided at the end of July 2019, the need for additional adjustments that will have a negative effect on the ANDRITZ GROUP's earnings development cannot be ruled out if the automotive market continues to weaken in future.

Among other things, the Group's future performance depends on whether new contracts can be secured to a sufficient extent. It can be difficult to predict when an order for which the ANDRITZ GROUP has provided a quotation will actually be awarded. Contract awards are often affected by events outside the control of the Group, such as prices, demand, general economic conditions, the granting of governmental approvals, and the securing of project financing. This uncertainty can cause difficulties in aligning the Group's fixed costs with the expected order volume.

In addition, natural disasters, pandemics or epidemics (such as the virus Covid-19) could also have a negative effect on development of the order intake, the liquidity, and the financial structure of the Group.

Acquisition and integration of complementary business segments

One of the ANDRITZ GROUP's main strategic goals is to become a full-line supplier in all of its business areas through organic growth and complementary acquisitions. In the course of implementing this strategy, the Group has acquired and integrated a number of companies with worldwide operations since 1990.

However, there is no guarantee that the Group will be successful in identifying and acquiring appropriate acquisition candidates in the future, or that suitable candidates and sufficient funding will be available for acquisitions. In the past, ANDRITZ was largely successful in integrating newly acquired companies. However, there is no guarantee that planned objectives and synergies can be realized for all acquisitions in the future (including the ongoing integration of the most recently acquired companies), or that the Group will not be confronted with new risks or legacy risks that have not been identified or accurately evaluated.

Procurement and manufacturing

The Procurement department regularly checks the important suppliers for the ANDRITZ GROUP in order to identify risk potentials (ability to deliver, quality management, financial situation, etc.) and risks at an early stage. This also applies in particular to purchase orders beyond a defined amount. In addition, the capacity situations are checked and at least a second supply option is reviewed if possible.

In manufacturing, ANDRITZ relies on a targeted make-or-buy strategy in order to better balance the fluctuations in capacity utilization that are typical of project-related business and make best possible use of the company's own manufacturing capacities. Process-relevant key components for ANDRITZ plants and products are mainly manufactured and assembled in the Group's own workshops, whereas simple components are largely purchased from qualified suppliers, who are subjected to regular checks on quality, on-time delivery, and compliance. Essential success factors to ensure short lead times and on-time production in manufacturing are precise planning as well as high commitment and flexibility on the part of employees. Internally, ANDRITZ uses flexitime contracts and, especially in Europe, a flexible contingent of temporary workers to better cope with fluctuations in workload.

ANDRITZ tries to balance out fluctuations in capacity utilization as flexibly as possible. However, there is no guarantee that ANDRITZ will always be able to compensate immediately for larger fluctuations in capacity utilization, and failure to do so could in turn have a negative impact on the earnings development of the Group.

Human resources

The ANDRITZ GROUP seeks to be an attractive employer for its employees and also tie them to the company in the long-term. High quality standards in the selection process guarantee that the most suitable candidates are recruited for the positions becoming vacant. However, there is no guarantee that employees will not leave the company again after a short time. This could not only result in considerable costs, but also lead to a deterioration in customer and service orientation. ANDRITZ tries to keep fluctuations to a minimum by offering interesting international career opportunities, incentive plans, and focused training programs.

Digitalization

Based on extensive and long-term experience as a supplier of technologies and systems for various branches of industry, ANDRITZ offers a broad portfolio of intelligent, digital solutions that provide significant help to customers in achieving their production and corporate goals. These innovative digitization solutions that have been tested worldwide in many reference plants are combined under the technology brand Metris. Metris is based on three strategic pillars: Industrial IIoT with technology focus on smart sensors, big data and augmented reality, Smart services, and the Ventures sector. Metris technologies are the very latest state of the art, and they are subject to constant further development and can be fully tailored to individual customer requirements. ANDRITZ considers digitalization to be a vital growth sector for the future and hence will focus strongly on development of digital products and solutions, including data security, in the coming years. However, the speed at which digitalization is progressing also presents a risk if ANDRITZ does not succeed in mastering the challenges relating both to development of products and solutions and to internal processes with the necessary speed.

Capital market risks

Apart from company-related factors, development of the ANDRITZ share price is also dependent on price fluctuations on the international financial markets. Major price fluctuations and high volatility on major stock markets may have a negative effect on the ANDRITZ share price.

As a publicly listed company, ANDRITZ is regularly assessed by financial analysts and institutional investors. Analysts' recommendations to buy or sell ANDRITZ shares and subsequent investment decisions by shareholders may cause considerable fluctuations in the share price. ANDRITZ has consistently followed a policy of open and transparent information exchange with shareholders and the financial community to avoid unfounded fluctuations in its share price.

The high level (just under 70%) of public free float of ANDRITZ's total outstanding shares and its intensive investor relations activities have led to active trading in ANDRITZ shares on the Vienna Stock Exchange. There is no assurance, however, that active trading will be maintained in the future. If active trading was not maintained, the liquidity and market price of ANDRITZ shares would suffer adverse effects, and investors may not be able to sell their shares at what they perceive to be an acceptable price. In the absence of active trading or in the event of a major change in market capitalization, the ANDRITZ share could be removed from various international industrial and stock exchange indices, for example the ATX, the leading index of the Vienna Stock Exchange, or other indices. This could result in major changes in the price of the ANDRITZ share.

Operational risks

Project risks

In conjunction with the delivery of equipment and services, the ANDRITZ GROUP is under contractual obligation in many cases to provide performance guarantees and to meet certain deadlines. If the performance data stated are not achieved or if deadlines are not met, the Group may have to pay damages or perform remedial work at its own expense. If a guaranteed performance level is missed by a wide margin, deadlines are significantly exceeded, or the customer does not accept the plant for other reasons, the customer may have the right to terminate the agreement and return the subject of the contract to ANDRITZ for a full refund and recover damages. Such action could have a negative effect on the Group's financial development.

Many of ANDRITZ's projects are based on long-term, fixed price contracts. The sales and operating margins realized in a fixed price contract may vary from original estimates as a result of changes in costs (especially fluctuating material costs), particularly on projects that include engineering and construction of complete plants, and where labor services have to be bought from third parties.

As certain parts of the Group's supplies are outsourced, the Group may be forced to quote at a fixed price to the customers without knowing the exact cost of the parts purchased. While ANDRITZ makes estimates using empirical data and quotes from potential suppliers, these estimates may not always be completely accurate. As a result, the Group has experienced considerable losses on some projects in the past. Problems and losses of this kind may also occur in future and adversely affect the Group's financial development.

In individual projects, ANDRITZ also has responsibility for plant-wide engineering and/or installation and construction in addition to the supply of ANDRITZ equipment and systems. These contracts bear the risks discussed above, but also entail certain risks relating to greater on-site responsibilities, including environmental matters, local labor conditions as well as risks relating to geology, construction, and installation. Additionally, the Group is exposed to the risks inherent in managing the third parties providing construction, installation, and engineering services on these projects (such as strikes and other labor disruptions, which can lead to delays in start-up or failure to meet deadlines). The Group has put risk management procedures in place, including insurance programs, contract policies, and project management discipline, to reduce these EPC-related risks (EPC: Engineering, Procurement, Construction) as far as contracts allow. Nevertheless, there is no guarantee that these procedures are sufficient to prevent negative financial consequences. The Group has experienced significant losses on certain past projects in this regard, and similar difficulties and losses may occur in the future in a way that would adversely affect the Group's financial condition.

In many EPC and other projects, the ANDRITZ GROUP participates with third parties with whom it shares a series of risks. While the Group attempts to make sure that risks in such projects are properly allocated, there can be no assurance that this will always be successful. Moreover, the inability of one of the Group's consortium partners to fulfill its obligations on the project, including indemnity obligations to the Group, may have an adverse material impact on the financial results and the liquidity of the Group.

Limitations of liability

Liabilities arising out of the Group's contracts may include liabilities for customers' loss of profits and other liabilities that can vastly exceed the value of the contract in question. While the ANDRITZ GROUP endeavors to include appropriate limitations of liability in its contracts, there can be no assurance that appropriate limitations will in fact be in place in all contracts or that such limitations will be enforceable under the applicable law.

Government contracts

A certain amount of the orders are placed by government entities. These projects can involve the performance, liability, and EPC/turnkey contract risks described above. Due to public bid requirements and local laws, it may not always be possible for the Group to obtain its desired contractual safeguards, and thus it may remain more exposed to such risks in connection with these projects.

Legal proceedings

In the course of its business, the ANDRITZ GROUP is party to numerous legal proceedings before both administrative and judicial courts and bodies as well as before arbitration tribunals. The substantial majority of such proceedings (such as contract and project disputes, product liability claims, and intellectual property litigation) can be considered typical of the Group's business. Where appropriate, provisions are made to cover the expected outcome of proceedings to the extent that negative outcomes are likely and reliable estimates can be made. There is no guarantee, however, that these provisions will be sufficient. Given the amounts at stake in some of these disputes, a negative decision for ANDRITZ in one or several of these legal disputes may have a significant, adverse effect on the earnings and liquidity position of the Group.

In product liability, there are a number of cases alleging injuries and/or death resulting from exposure to asbestos. Details are available in the Notes to the Consolidated Financial Statements, chapter G) 36. Contingent Liabilities.

Currencies

A substantial number of the ANDRITZ GROUP's subsidiaries are located outside the euro zone. Since ANDRITZ AG reports in euros, the company converts the financial statements of these companies into euros in the consolidated financial statement. In order to address translation-related foreign exchange risks, it is generally assumed for the purposes of risk management that investments in foreign companies are made in the long term and the results are reinvested continuously. The effects of fluctuations in exchange rate when converting net asset items into euros are included in currency translation adjustments in Group equity.

A significant portion of the Group's sales and costs of orders placed by group companies are not settled in the respective functional currency, but in other currencies, above all in US dollars. The currencies in these countries are subject to fluctuations in exchange rates. Currency risks in connection with orders that are not invoiced in euros are minimized by derivatives, in particular forward contracts and swaps.

Although the Group attempts to hedge the net currency exposure of those orders not invoiced in the respective functional currency of the group company by forward contracts, currency fluctuations can result in the recognition of exchange rate losses in the Group's financial statements. Development of exchange rates may also have translation effects on the Group's sales and earnings whose values are converted into euros. In addition, shifts in exchange rates may affect ANDRITZ's position relative to its competitors, although many competitors of ANDRITZ are also based in the euro zone. As some of ANDRITZ's major customers are based outside of the euro zone, changes in exchange rates could lead to delays in project decisions by those customers. Also, the shareholders' equity of the ANDRITZ GROUP is not hedged and thus could be affected by changes in the exchange rate.

A change in the exchange rate of the euro against many other currencies could also have both a positive and a negative impact on the shareholders' equity as well as on the sales and earnings development of the ANDRITZ GROUP (translation effect).

Insurance

While the ANDRITZ GROUP maintains insurance programs to cover typical insurable risks related to its business, there can be no guarantee that this insurance can fully cover potential losses, that the insurers will be liable to pay damages, nor that the amount of the Group's insurance will be adequate. Moreover, the Group is involved in certain industries (for example the space and nuclear industries) for which risks are uninsurable or cannot be insured against in full, or where it is not always possible to comply with all of the conditions required to contract insurance. Any material liability not covered by insurance could thus have a substantial, adverse effect on the Group's financial situation.

Cyber security, hacker attacks

The increasing digitalization and networking of plants and machinery requires highly effective and efficient solutions to maintain data security. Unauthorized access to or copying of sensitive company data as well as insufficient system availability as a result of hacker attacks are substantial risks to which ANDRITZ is increasingly exposed. This may not only affect ANDRITZ's own systems, but also IIoT solutions installed by ANDRITZ at customers' premises. ANDRITZ counters cyber risks and potential hacker attacks by using the latest IT security technologies (for example firewall systems) and by stricter control of access rights. One focus lies on continuous further development of security measures. Cyber attacks should be detected at an early stage with the aid of an optimized IT infrastructure so that they can be repelled successfully. However, unauthorized access to and loss of sensitive and confidential data both at ANDRITZ and at its customers' premises as a result of cyber attacks cannot be ruled out, nor can any resulting enormous financial losses for which ANDRITZ may be held responsible.

Internal control and risk management system

ANDRITZ has a Group-wide internal control and steering system (ICS) whose main task is to identify nascent risks at an early stage and – if possible – to implement countermeasures promptly. This system is an important element of active corporate management. However, there is no guarantee that these monitoring and control systems are effective enough.

The Executive Board is responsible for implementing and monitoring the ICS for the accounting process and financial reporting. For this purpose, binding Group-wide regulations and guidelines/policies have been adopted for the major business risks and also for the financial reporting process.

The accounting department, which includes financial accounting, reports directly to the Executive Board. Several organizational measures have been implemented to ensure that the legal requirements are met. In particular, appropriate regulations ensure that complete, correct, timely, and orderly entries in the books and other records are made. The entire process from procurement to payment is subject to standard group-wide guidelines/policies that are intended to minimize any essential risks these processes may entail. These measures and rules include segregation of functions, signature authorization matrices, and signatory powers for authorizing payments applying on a collective basis only and restricted to a small number of employees (four-eyes principle). Control measures relating to IT security play an important role in this context. For example, segregation of duties is enhanced by the generally restrictive assignment of IT authorization by the financial software used (SAP). The safety standards in this financial software are also guaranteed by automated business process controls installed directly within the system.

Standard group-wide accounting and evaluation principles to record, book and balance business transactions are provided by the ANDRITZ GROUP IFRS Accounting Policy and are binding on all Group companies. Automatic controls in the consolidation and reporting system are in use in order to avoid misrepresentation as far as possible, as are numerous manual checks. The control measures range from review and discussion of interim results by the management to specific reconciliation of accounts.

By using a standardized, Group-wide financial reporting system, together with ad-hoc reporting on major events, the Group endeavors to ensure that the Executive Board is properly and promptly informed on all relevant issues. The Supervisory Board is informed in Supervisory Board meetings held at least once every quarter on the current business development, including operative planning and the medium-term strategy of the Group. In special cases – for example in the event of acquisitions or restructuring – information is also provided directly to the Supervisory Board. In addition, the Chairman of the Supervisory Board receives a monthly report, including the key financial figures with comments. Internal control and risk management are among the topics dealt with during audit committee meetings.

Internal Auditing, set up as an executive department reporting to the Executive Board, audits individual processes or Group companies according to an audit schedule defined for each year as well as conducting audits in special cases (ad hoc audits). In addition, Internal Auditing monitors compliance with legal provisions and internal directives. It is active in reporting and assessing the audit results as an independent, internal department that is not bound by instructions from outside bodies.

The auditor of the Group's financial statements assesses risk management functionality in the ANDRITZ GROUP and reports on it to the Supervisory and the Executive Boards. Risk management functionality was checked and approved in 2019 by the auditor of the Group's financial statements.

Consolidated Corporate Governance report

The consolidated Corporate Governance report is available in the section "Consolidated Corporate Governance report" or on the ANDRITZ website andritz.com.

Significant events after the balance sheet date

There were no events of material significance after the balance sheet date.

CONSOLIDATED NON-FINANCIAL STATEMENT

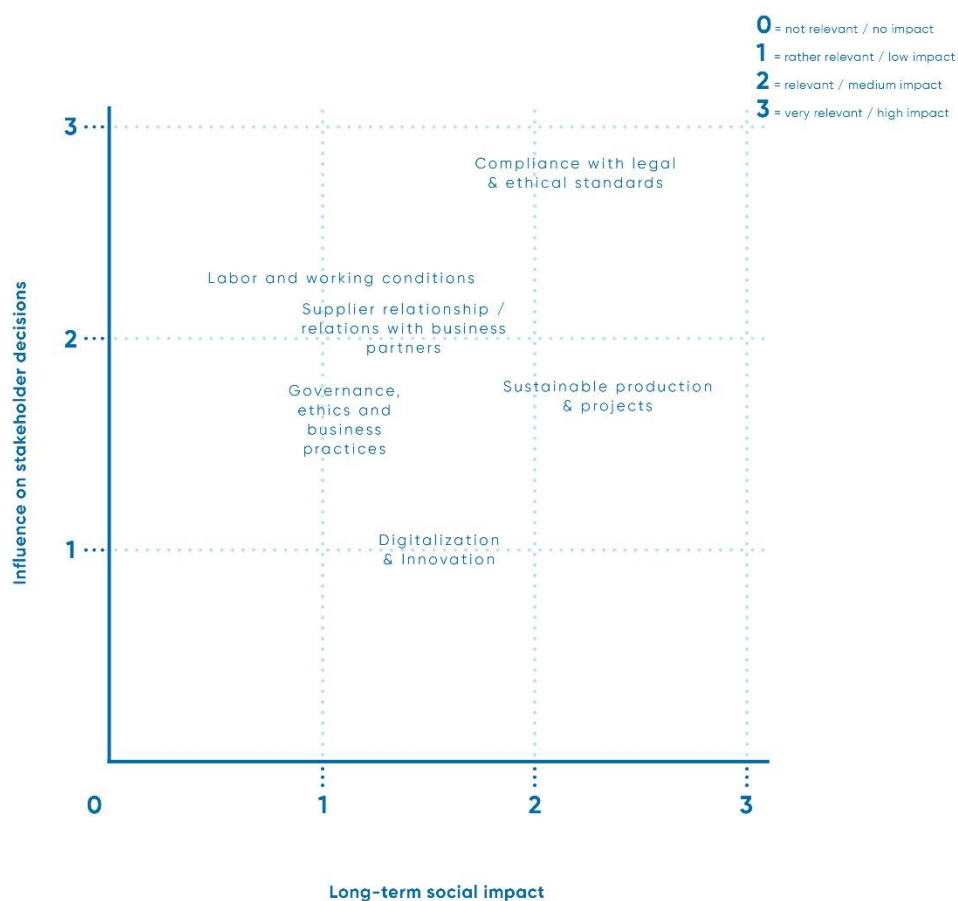
The following section describes the non-financial performance indicators on social, employee, and environmental matters and in respect of human rights. Information on measures to combat bribery and corruption is available in the consolidated Corporate Governance report.

Materiality analysis

The ANDRITZ GROUP publishes information relating to sustainability in accordance with the criteria of the Global Reporting Initiative (GRI Standards, Option: Core). A list of all Key Performance Indicators (KPIs) reported, including comments, is provided in the "GRI Index" chapter in the Notes to the Consolidated Financial Statements.

Stakeholder surveys and interviews with relevant stakeholders have already been conducted several times in order to establish the main reporting topics and relevant fields of activity for the ANDRITZ GROUP. The last survey was performed in the autumn of 2019 on an anonymous basis using an online questionnaire.

The survey was completed by a total of 249 people. Most of the participants were employees (59%) followed by suppliers (22%) and then customers (8%). The majority (69%) came from Europe, while 15% were from Asia and around 7% from North America. An extensive media analysis was conducted supporting the survey.



The most relevant topics for ANDRITZ with the largest social impact are adherence to legal and ethical standards, compliance within the company and sustainable production and projects. Other important topics are good working conditions, fair treatment of suppliers and business partners, governance, ethics and business practices, digitalization and innovation. As a result, these topics in particular form the basis of the report, but also other items surveyed, such as occupational health and safety and health protection.

Non-financial risks

Risk management is an integral part of all business processes and extends over all strategic and operative levels. While the section on risk management describes the main general risks (pursuant to Section 243 (1) of the Austrian Business Code UGB), the non-financial risks described below (pursuant to Section 267a (3) line 5 UGB) relate to the essential concerns of the materiality analysis.

Non-financial risks for the company as well as for the company's environment and stakeholders can result from the company's own business activities or from business relationships. They result not only from increasing customer demands, but also more and more from legal regulations that could result in financial penalties if not obeyed. This could lead to a loss of confidence on the part of customers or other stakeholders.

Human resources

The ANDRITZ GROUP seeks to be an attractive employer for its employees and also tie them to the company in the long-term. The company considers it important to provide a safe and healthy working environment for employees, applying the principle of equal treatment without any form of discrimination, harassment or retaliation. ANDRITZ respects the values and cultures of other nations and appreciates the differences in their way of thinking and backgrounds. However, it cannot be ruled out that some employees may feel unfairly or not equally treated. There are different means of lodging a complaint in such cases, for example to the respective local HR organization, the Works Council, or using the online group-wide whistleblower system.

Working conditions that are perceived to be unsatisfactory can lower the motivation and enthusiasm of employees and subsequently have a negative impact on productivity. Increasing sick leave and fluctuation rates caused by this can result in additional costs for ANDRITZ. Professional promotion and qualification of employees are an important concern at ANDRITZ, but can only be achieved when the employees are willing to take on these challenges personally. A lack of willingness to undertake further training can result in employees not being adequately qualified.

ANDRITZ could become less attractive as an employer if there are insufficient opportunities for further professional and personnel training for employees. As a result, the company makes every effort to take an interest in changes in the professional world and new demands by employees, particularly employees from the younger generations.

Supply chain management

Adherence to internationally applicable environmental and social standards is important, especially when working with suppliers from emerging economies. Possible breaches (e.g. child labor, disregarding of safety regulations, underpayment, disposal of hazardous substances, etc.) not only harm ANDRITZ's own image, but also jeopardize its existing or future business relationships with customers. This could have a negative effect on order intake and/or on the Group's order backlog.

Thus, ANDRITZ endeavors to forge ahead with the implementation of internationally recognized environmental and social standards at suppliers' premises and also to check whether these standards are obeyed. An important step was taken in developing a specific policy for suppliers on the basis of the general code of conduct. In China

and India, two auditors are monitoring adherence to these standards by local suppliers and arrange corrective measures in the event of any deviations. Serious infringements can lead ultimately to termination of the business relationship with these suppliers in extreme cases.

Environmental protection inside and outside the company

The systems and plants supplied by ANDRITZ comply with the highest environmental and safety standards and fulfill the respective legal requirements of the countries in which they are installed. Nevertheless, maintenance errors or other unforeseen and uncontrollable occurrences could lead to serious injury or death – also involving a larger number of people – or to significant property damage if plants are not operated correctly, and ANDRITZ may ultimately be held liable for this.

The ANDRITZ GROUP uses or generates hazardous substances in its manufacturing facilities in some cases. Many manufacturing facilities have waste management concepts that have been drawn up and are controlled by professionally qualified waste managers. They are also responsible for fulfillment of the general obligations for collection, transport, storage and treatment of waste. The hazardous waste generated during operations is stored in lockable rooms until it is collected by the disposal company. Appropriate records are kept on quantities of hazardous and non-hazardous waste as well as waste oil. Nevertheless there is no guarantee that hazardous waste is disposed of according to the regulations and that environmental remediation is possible as a result. Sometimes hazardous chemicals and materials are also used during installation and other work on job sites. In the event of an accident, for example spillage of hazardous materials, a fire, or an explosion, the Group could be held liable for property damage, personal or fatal injury, and environmental remediation.

Risks due to climate change

Natural physical impacts of climate change relate to the growing frequency and intensity of extreme weather phenomena, such as heat, storms (hurricanes) flooding or forest fires. These phenomena can have a negative impact on company locations or job sites as well as on suppliers' infrastructure, causing a shortfall in manufacturing capacities and possibly also leading to other consequential damages.

Extreme weather phenomena could also result in damage to the transport infrastructure and thus have a severe impact on the logistics sector, which is handled by external service providers for ANDRITZ. Delays and shortfalls in freight transport could have a substantial negative effect on the production process. As a result, the freight transport process must be adapted if necessary to the new general conditions caused by climate change.

The climate changes in evidence worldwide in the past few years have partly resulted in significant price increases or extreme price volatility for individual raw materials. Other changes in climate could result in rising input prices for production, energy, transport and insurance. One approach in the energy sector would be to make production operations self-sufficient in energy, for example, as is already the case in modern pulp mills fitted with ANDRITZ equipment. One example of this is the bioproduct mill in Äänekoski, where the wood raw material is converted into bioproducts and bio-energy as well as being used to produce pulp. Fossil fuels are not needed because the entire energy demand can be covered using wood.

Efforts are also underway at the ANDRITZ production locations to enhance energy efficiency and increase the proportion of renewable energy sources. The proportion of energy costs in the overall amount is relatively small. However, climate change could increase energy consumption by the ANDRITZ GROUP in the longer term due to a need for more heating or air conditioning. Higher taxation on fossil fuels or CO₂ emissions could also result in additional costs in the production sector. Hence, several locations have introduced an environmental management system or already have ISO 14001 certification. The measures to increase energy efficiency in manufacturing that were implemented last year thus also resulted in cost savings.

In terms of products, climate change causes a risk of certain products possibly no longer being sold successfully or even becoming unsaleable. ANDRITZ addresses these risks with a broad product portfolio in the “green technologies” sector. Today, the company already generates around 45% of its total sales from plants, technologies and processes with which energy is generated from renewable resources and which contribute towards protecting the environment and conserving resources.

The regulatory risk relates to government measures implemented due to climate change. This can take many forms. It is often difficult for companies to take long-term investment and operational decisions because climate policy at national, EU and international level changes frequently.

Work and travel safety

The safety of ANDRITZ employees is always a top priority, especially since the work of ANDRITZ employees - not only on construction sites, but also in the manufacturing plants - involves a number of safety risks. Under certain circumstances, the Group can also be held liable in the event of industrial accidents by ANDRITZ employees or persons working on behalf of ANDRITZ or if third parties are hurt in accidents. Even if there are strict regulations in the internal rules and standards, it is impossible to prevent accidents. That is why accident prevention has top priority.

A lack of planning and coordination of safety measures, no clearly defined responsibilities, non-compliance with site regulations, inadequate identification and analysis of risks, missing work permits and a lack of preparatory meetings are among the most frequent causes of accidents. It is the managers' task to instruct their staff properly, while the employees have a duty to apply the mandatory measures. Employees must also report risks in the workplace and take note of safety-critical incidents.

The cause of accidents is often a combination of different factors and human influences. Incidents that could easily have led to an accident – so-called safety-critical incidents – should be taken as a warning sign and it is important to determine and eliminate the causes quickly. Risk analyses are compiled for all areas of our work. Here, we must not only consider static processes, but also dynamic ones (manipulation and moving of parts, e.g. on job sites).

A global Travel Risk Management Policy defines the key points of the travel safety program. In order to make foreign assignments by ANDRITZ employees as safe as possible, the Corporate Security Group Function continuously monitors the situation in risk countries to which employees are deployed and provides information on current developments to travelers and project managers.

A country portal that can also be accessed via a smartphone app offers country-specific information, country analyses, and practical tips on the topics of travel health care and safety as well as updates and analyses on current developments in a specific country. These include political unrest or crises, for example, but also epidemics, like the current Covid-19 virus. Travelers are also informed at short notice of any sudden or imminent events (demonstrations, strikes, difficult weather conditions, airport closures, outbreaks of disease, etc.) that may have an impact on smooth travel arrangements. Employees should be able to make the best possible travel preparations on the basis of this information.

The ANDRITZ Medical helpline and Security Travel Helpline are available to employees around the clock for briefings before departure. In addition, travel medicine specialists, safety experts and situation analysts can answer general queries on the topic of safety when traveling as well as specific questions relating to the destination. The helplines also find medical and local service providers familiar with the location at the traveler's destination or organize classic emergency support and even evacuation in extreme cases. The primary objective is to offer staff comprehensive support to guarantee their safe return home.

Compliance

Premeditated or negligent breach of laws and internal rules and regulations by members of staff or managers bears substantial risks for ANDRITZ. That is why a comprehensive, group-wide compliance management system was implemented many years ago and has been certified according to ISO 19600 (Compliance Management System). One of the bases of the compliance management system is systematic detection of compliance risks. In the past years, ANDRITZ conducted a comprehensive risk analysis in order to implement measures to minimize risks in the future. In addition, regular training is conducted on the basis of the Code of Business Conduct and Ethics, which applies throughout the Group, and other policies. Further information on this is provided in the consolidated Corporate Governance Report. Compliance violations can result in fines, loss of profit, loss of sales that are secured by unfair means or dubious business partners, claims for damages from contract partners or third parties, additional tax payments, exclusion from public tenders, loss of image, fewer business opportunities, government sanctions and jeopardizing of company assets. The consequences for employees may be disciplinary measures or even dismissal and possibly also criminal prosecution. Information on all measures and activities in the compliance sector are available in detail the consolidated Corporate Governance Report.

Innovation

The business success of ANDRITZ depends to a large extent on the company's technical know-how and the resulting development of new products and technologies. ANDRITZ launched a global innovation management scheme (AIM – ANDRITZ Innovation Management) to enable employees to contribute innovative ideas for new products. In addition, two internal start-up competitions were held, several of which are already in the implementation phase.

The large number of ideas and projects submitted reflects the wealth of know-how, innovative power and commitment of the employees. However, innovation projects are often time-consuming and cost-intensive. Some projects fail to establish themselves on the market and have to be discontinued even though a substantial amount of financial and human resources has been invested in their development. The competitive pressure to produce new products and technologies all the time also bears the risk of quality deficiencies or of products being developed that do not succeed on the market as hoped.

Data protection

ANDRITZ endeavors to protect its intellectual property and technical knowledge as best possible, for example by means of patents and similar instruments. However, a large part of the company's knowledge and know-how cannot be safeguarded by means of intellectual property rights. In this case, there is a risk of third parties exploiting this situation and copying ANDRITZ products or technologies, thus jeopardizing ANDRITZ's ability to compete. On the other hand, data protection also involves protecting the data of third parties. In order to comply with the legal requirements, data protection officers have been nominated group-wide and trained. In addition, a data base was set up to document and handle the processes containing personal data. Nevertheless, the risk of infringing this law cannot be excluded. Penalties can be up to four percent of the Group's sales, which again creates a substantial risk for ANDRITZ.

As a result of the increasing number of incidents in the business world, ANDRITZ is also addressing the matter of attacks on computer systems. System users are manipulated by tricks like phishing mails in order to access internal and sensitive data and information or trigger unwarranted payments. In this context, a safe payment policy has been implemented group-wide. Furthermore, the instructions for secure payment transactions have been tightened and employees are constantly alerted to this topic by reminders that mails come from external recipients and by more information being provided in the intranet and employee magazine.

Human resources management

Committed and motivated employees are among the essential factors in ANDRITZ's long-term business success. That is why the company seeks to create a work environment in which the employees can develop their careers further and have opportunities to take on additional responsibility. The Human Resources group function plays an important role here. The strategic realignment initiated in 2018 was continued in the past year: the global HR organization is to move on from being a largely administrative department for HR to become an agile, focused and lean unit.

The focus lies above all on strengthening the role of HR as a partner to the business areas. So-called Global HR Business Partners not only assist the business areas on matters relating to human resources management, but are also responsible for the exchange of important information with the local HR managers. Increased use of shared services is also an important goal. Digitalization and global process orientation form the basis of all employee processes.

At operational level, the concept of the Centers of Excellence was further strengthened in the past year. Seven teams consisting of 10–20 members from various locations in all regions coordinate different projects in their area of responsibility according to goal and field of activity. The best practice principle plays an important role here: So-called lighthouse projects that are implemented successfully at individual locations should also be adopted by other locations.

#1ANDRITZway – core behaviors

The #1ANDRITZway initiative was a main focus of HR activities in the past business year. It is the logical further development of the ONE ANDRITZ campaign to create a sense of identity, which has been running since 2018 and is intended to position ANDRITZ as ONE group, both externally and internally. Derived from the vision, the mission and the defined values, #1ANDRITZway determines how cooperation is implemented in practice.

The core behaviors dictate standards for all current and future employees and the ways in which they behave, irrespective of their department, function or region. These core behaviors form an integral part of the way in which we work together and enable continuous, profitable growth and hence success.

The #1ANDRITZway initiative is divided into three main phases:

- Design phase
- Activation of executives
- Activation of employees

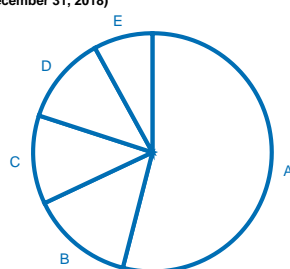
In the past year, the bases of the different behaviors were defined last year in a group-wide process involving around 700 employees from all regions and in different functions. The first phase (design phase) was completed at the end of 2019.

Executives will be trained as from 2020 so that they can act as role models for the desired behaviors. Ultimately, the different behaviors should be integrated into all employee processes, such as recruiting, annual appraisals, etc. and provide orientation for executives and staff.

Diversity

**Employees by region
as of December 31, 2019 in %**

(December 31, 2018)



A	54	55	Europe
B	14	14	North America
C	12	12	South America
D	12	11	China
E	8	8	Asia (without China), Australia, Africa

As a result of its global presence, ANDRITZ has a diversified employee structure and considers this to be a clear market advantage. As of the end of 2019, the company had employees from 34 countries. At the moment, 23 different languages are spoken at ANDRITZ. The Group uses this diversity and is committed to a multi-cultural work environment with international career perspectives. This creates positive effects because employees of different origins, religions and cultures and of different ages can exchange information and practical experience. The percentage of women amounted to 16.2% in 2019 (2018: 16.5%). In addition, some management positions at the first and second reporting levels were filled by women.

Employees by gender

	Absolute 2019	Absolute 2018	Percentage 2019	Percentage 2018
Men	24,733	24,303	83.8%	83.5%
Women	4,780	4,793	16.2%	16.5%
TOTAL	29,513	29,096	100.0%	100.0%

Education and vocational training

As a globally operating concern, ANDRITZ believes it is especially important to offer its employees sound basic and vocational training measures and international career opportunities. The internal development programs comprise training and learning opportunities for various target groups. This is intended to encourage all employees to acquire new skills and knowledge.

In most cases, the annual appraisal interviews form the basis of the training programs at the various locations. These interviews are conducted away from everyday routine and provide opportunities for members of staff and their supervisors to discuss work content and goals, but also to define perspectives and possible career development options. In 2019, approximately 72% of the workforce took part in annual appraisal interviews (2018: 74%).

Talents management

The Human Resources group function gives particular attention to the program for leadership development: Ultimately, the performance potential of the employees – based on training – is one of the most important factors in business success.

Global talents are identified and selected by means of the annual, group-wide talent management process. These young talents go through the three-year ANDRITZ Global Talent Program. The purpose of this program is to build up young talents and high-potentials for future assignments in key global positions. The program was introduced ten years ago and comprises a mixture of training, mentoring and projects.

The ANDRITZ Global Leadership Program addresses employees in key global positions and potential candidates for their succession and concentrates on the development of leadership skills and implementation of the company's business strategy in day-to-day work. It also comprises different activities, such as training modules, 360° feedback, mentoring tasks, and a so-called HR dialog. The link between these two programs is the mentoring program.

In addition to these two programs, a development program has been created primarily for engineers. The ANDRITZ Global Engineering Career offers four different career paths. Each career path has a similar structure, but each one highlights and provides training in different skills. Horizontally developed careers and management routes are also supported.

A project was implemented during the reporting period to define the holders of key positions in the company and plan appropriate succession. There were 300 key positions defined worldwide and possible successors listed. This process is to be rolled out further in the coming year.

Vocational training as an important social task

The purpose of the apprentice shops is to offer young people sound training and thus guarantee them a secure job. Young people not only acquire specific expertise at the Graz location, which has been training apprentices since 1922, but also in many other apprentice shops worldwide. Furthermore, they also obtain important key qualifications such as a capacity for teamwork as well as an awareness of safety and quality concerns. As of December 31, 2019, there were 900 apprentices worldwide undergoing vocational training (2018: 909 apprentices).

In addition, ANDRITZ has the opportunity to address highly qualified young talents through collaboration with universities and other educational institutions. Efforts are made to attract and secure them for the company in the long term. Students also receive support for their final theses and are employed in various forms during their courses of study.

ANDRITZ as an attractive employer

One of the main goals of employer branding activities is to strengthen ANDRITZ's position as an attractive company on the market. The measures initiated in 2018 were also further intensified last year. ANDRITZ employer value positioning was established ("ANDRITZ – Where passion meets career"). The careers page on the web site was further adapted, LinkedIn was used increasingly for employer branding activities and more job vacancies were posted via the job portal.

There is a strong focus on incorporating employees into the company in the so-called onboarding process. Shortly after starting work for the company, new employees are asked via the internal net promoter score whether they would recommend ANDRITZ as an employer to others. Positive aspects mentioned last year were the flexible working hours and the option of working from home. The respondents noted room for improvement in the orientation phase and an understanding of the company's structures.

4,171 employees were recruited in the past year, 12% of whom were over 50 years of age, 59% between 30 and 50 and 29% under 30 years old. Age distribution in the company has been very well balanced for many years. More than half of the employees (57%) are between 30 and 50 years old (2018: 57%). The percentage of under-30s is 14% (2018: 14%). 29% of the employees are over 50 years of age (2018: 29%).

ANDRITZ believes it is important to tie its employees to the company in the long term. This is also reflected in the figures: Within the Group, employees stay with the company for an average of 11.1 years. The fluctuation rate in 2019 was 11.7% or 3,444 employees. This rate dropped compared to the previous year (2018: 12.1% or 3,531 employees).

Fluctuation by gender and age group

	Contracts terminated 2019	Contracts terminated 2018	Fluctuation rate 2019*	Fluctuation rate 2018*
Men	2,920	3,016	11.8%	13.3%
Women	524	517	11.0%	12.0%
< 30 years old	752	821	18.2%	20.8%
30-50 years	1,816	1,883	10.9%	12.3%
> 50 years old	876	827	10.2%	10.8%
TOTAL	3,444	3,531	11.7%	12.1%

* Calculation of fluctuation rate: contracts terminated in relation to the average number of employees. Contracts terminated include dismissals by the employer and resignation of employees.

Equal treatment and fairness towards all employees

As an attractive employer, ANDRITZ's goal is to offer its workforce a working environment offering equal opportunities, attractive means of further development, and fair pay for all, regardless of their location worldwide. The basic rights apply to all employees throughout the Group. These include the legal right of employees to co-determination and compliance with the principles and standards of the International Labour Organization (ILO) concerning the freedom of association, abolition of forced labor, child labor, and discrimination as well as fair and performance-based pay.

Regular and also event-driven meetings are held by the ANDRITZ AG Executive Board and the members of the Works Council to ensure and support an open and transparent exchange of information between both bodies. The company supports the formation of internal committees representing employees' interests. Freedom of assembly applies at all locations in accordance with the respective local legislation.

ANDRITZ does not condone or tolerate any form of employee harassment or discrimination by other employees due to gender, age, origin, religion, nationality, and so on. The working environment should be free of intimidating and offensive behavior for every employee. This is clearly documented in the Group-wide Code of Business Conduct and Ethics and in the HR policy applying throughout the Group. Possible ways of lodging a complaint are also defined. The notification periods for communication of significant changes in operations (closure of company locations, layoffs, etc.) are defined in a policy applying Group-wide.

Personnel expenses and social benefits

Human resources expenses amounted to 2,015.2 MEUR in the past year (2018: 1,787.0 MEUR). The increase is mainly due to the first-time consolidation of Xerium Technologies, Inc. in October 2018. ANDRITZ remunerates its employees fairly and in line with the respective collective agreement regulations applying. In countries where there are no collective agreements, remuneration is oriented towards the respective average salary.

Salaries for women averaged approximately 86% of salaries for men during the reporting period. ANDRITZ also supports employees with child care, for example by arranging part-time employment contracts. Several locations have company-run kindergarten facilities, some of which also focus on technical skills. The company is also not averse to providing part-time contracts for men or other forms of support with child care.

In countries where the social welfare system is less well-developed than in Europe, employees receive voluntary social benefits ranging from accident insurance to contributions to pension funds as well as life insurance policies and support for dependents.

Digitalization

Another focus of activities by the Group function is development of the “digital workplace” for all employees. The foundation for this is currently being laid with the development of a digital human resources tool that is to be used by all employees worldwide. The launch of this tool is expected in the first quarter of 2021.

Respect of human rights in execution of projects

ANDRITZ respects and supports the protection of internationally recognized human rights and maintains the principle of equal opportunities regardless of gender, religion, origin, nationality, age, sexual orientation, or disability. ANDRITZ considers it a duty to use every opportunity to promote compliance with human rights – both inside and outside the company.

Its business activities contribute towards economic, ecological and social progress. But sometimes these activities also affect individuals. The company endeavors in collaboration with the respective customers to draw up and implement compensatory measures or to help the customer to implement them.

Before participating in large-scale projects, due diligence audits are conducted in order to determine their potential effects on man and his environment. The resulting data and findings are evaluated and analysed. Participation in projects is then decided on this basis. Furthermore, ANDRITZ Hydro is a sustainability partner of the IHA (International Hydropower Association) and supports global acknowledgment of the “Hydropower Sustainability Assessment Protocol”.

Group Procurement Management: Group-wide collaboration and support for all ANDRITZ procurement organizations

The ANDRITZ global purchasing organization defines the strategy and general conditions for collaboration with around 38,000 suppliers worldwide. Approximately 3,400 of these suppliers cover almost 80% of the external purchasing volume.

In order to be an ANDRITZ supplier, it is necessary to comply with strict criteria in terms of quality, costs and on-time performance as well as the supplier's stance towards occupational health and safety, compliance and sustainability. Strict adherence to the ANDRITZ Code of Conduct and Ethics is also a basic criteria.

Global supply chain management at ANDRITZ is divided into four main areas:

- Strategic Material Group Management (forward sourcing) bundles products and services into categories, thus creating optimum general conditions for the entire group.
- Operations Development aims to enhance data quality and transparency as well as the efficiency of internal processes and organizes workshops and training for personnel and organizational development.
- Global Logistics handles cooperation with logistics partners worldwide.
- Supplier Compliance & Sustainability works group-wide to improve supplier compliance and sustainability.

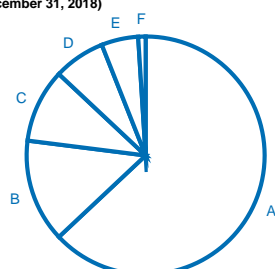
ANDRITZ relies on long-term partnerships and remains in close contact with suppliers during the entire execution of a project. In the event of critical components or new suppliers, ANDRITZ also monitors the production process on the spot in many cases.

The total purchasing volume in the past year was 4,586.9 MEUR (2018: 4,324.6 MEUR). In execution of its orders, ANDRITZ tries – as far as possible – to source its materials near the manufacturing facilities. Now that production capacities are being moved increasingly to China and India, ANDRITZ is using more suppliers from these countries.

The share of services and products of the external purchasing volume sourced locally was 69.3% / 2,266.1 MEUR in 2019 (2018: 72.3% / 2,140.4 MEUR). 62.7% of the external purchasing volume was sourced in Europe, 14.6% in China and 9.8% in North America.

Purchasing volume by region as of December 31, 2019 in %

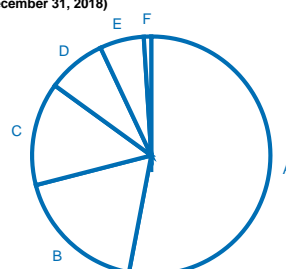
(December 31, 2018)



A	63	(66)	Europe
B	14	(13)	China
C	10	(12)	North America
D	7	(2)	South America
E	5	(6)	Asia (without China)
F	1	(1)	Others

Manufacturing capacity by region as of December 31, 2019 in %

(December 31, 2018)



A	53	(53)	Europe
B	18	(22)	China
C	14	(11)	North America
D	8	(10)	Asia (without China)
E	6	(4)	South America
F	1	(0)	Rest of the world

Consumption of materials

Project materials and services account for the largest share of materials required (40.7%) – measured on the basis of cost. This includes mechanical parts, electrical components, structural steel and conveying technology, mechanical structures, installation work, and start-up/commissioning. 38.6% is spent on manufacturing materials such as sheet metal, screens, rods, profiles or cast and forged parts and 20.7% as overheads for material, services and investments.

Logistics

The Logistics team – as a part of Global Procurement – assists the business areas with the logistical implementation of customer projects. Other important tasks in the logistics department are definition of transport standards and guidelines, calling for tenders, negotiating framework agreements with logistics service providers, and conducting internal training courses. As ANDRITZ does not have its own vehicle fleet, transport services are purchased from third parties on a project-specific basis. As a result, CO₂ emissions are generated externally so these figures cannot be reported.

Supplier Compliance and Sustainability

The Group Supplier Compliance and Sustainability Officer is responsible within the Purchasing group function for the supplier compliance and sustainability topic and defines the processes and goals in this sector. This officer's tasks included monitoring these processes and the achievement of objectives and providing support to the purchasing organizations on topics relevant to supplier compliance.

The minimum requirements for business relationships as a supplier to ANDRITZ are defined in the ANDRITZ Supplier Code of Conduct and Ethics. This code was published for the first time in 2015 and revised in 2019.

As part of a risk assessment process, suppliers must confirm and accept the content of the supplier code in writing in the supplier relationship management tool (SRM) as part of the qualification process. In addition, suppliers must complete a questionnaire that then provides a compliance rating according to a standardized evaluation. If the rating is too low, corrective actions are defined with the supplier concerned if necessary. This compliance questionnaire was also updated in October 2019.

This registration process has been completed by 8,922 suppliers. Hence, just under 50% of the purchasing volume is covered with suppliers who have agreed to the principles of the ANDRITZ Supplier Code of Conduct and Ethics. The goal is to achieve 80% coverage in 2020.

The supplier compliance questionnaire and the respective rating has also been integrated into the group-wide supplier assessment tool in the meantime and is thus an important part of the check on business partners' quality and performance.

Awareness-raising training

Online training to underline the importance of compliance and sustainability internally and externally has been provided for three years. This training is available in six languages and must be completed by all purchasers in the ANDRITZ GROUP.

Integration of the entire supplier compliance and sustainability process into the internal training program for the ANDRITZ purchasing organization is also a part of awareness raising.

This is more in-depth training on the supplier compliance and sustainability processes, the tools, the audit process, and the group-wide ANDRITZ compliance organization. This training is provided as classroom training or in webinars.

Auditors in India and China

A decisive factor in the implementation of supplier compliance and sustainability in emerging markets is the appointment of two auditors in India and China.

When the two auditors began their work, harmonized processes and instruments were created to conduct supplier compliance and sustainability audits (SC&S) and to improve supplier compliance performance on a continuous basis.

So far, 102 audits (including follow-ups) have been conducted in India on 80 suppliers. In the past year, the focus lay on development and implementation of a supplier compliance and sustainability process for the Hydro business area in India.

In China, there have been 73 audits (including follow-ups) on 67 suppliers, and there have already been extremely positive results in terms of supplier improvement.

In the coming year, an SC&S manual for the audit program is to be issued in addition to regular checks on the compliance level by means of audits and corrective measures on the basis of the audit findings.

Quality management

Quality management in the ANDRITZ GROUP covers products and applications, business processes as well as safety and environmental topics and is viewed holistically. Global requirements and standards improve the general understanding of processes and functions as well as enhancing collaboration and clear areas of responsibility. These measures should increase transparency, minimize risks, and support employees in their day-to-day work.

In everyday work, the quality requirements are structured along the business areas and at local level and can be accessed easily by employees in the company's intranet. Quality management accompanies an order from its award up to completion. There are also guidelines applying to support activities such as IT or communications.

External verifications confirm consistent and effective implementation of the standards. Meanwhile, 50 sites have been certified according to OHSAS 18001 (occupational health and safety), 16 according to ISO 45001 (occupational health and safety) and 74 according to ISO 14001 (environmental management systems). Furthermore, all products are certified internally and externally (Machinery Directive, ASME, NR 12, GB 150, ISO, ANSI, EN, and DIN). Thus, they meet the highest standards and are checked regularly for potential health and safety impacts.

Occupational health and safety

Occupational health and safety has highest priority at ANDRITZ. The company management, above all the Executive Board, is required to increase the awareness of good health and safety practices in all employees by setting a good example themselves. ANDRITZ pursues a zero-accident goal and a pro-active safety culture to avoid accidents. All employees are entitled to reject or halt any work that is unsafe in their opinion – without having to fear possible disciplinary measures.

The Quality and Safety Management group function defines the strategy and measures implemented by the health, safety and environmental officers together with the safety officers in the business areas. In addition, regional safety officers promote this topic generally in the regions. At the company locations, managers are responsible for safety at each company or location.

In addition to the statutory requirements, the health and safety policy that was revised in August 2019 is the minimum standard for all ANDRITZ offices. Furthermore, additional guidelines can be defined at each location to improve safety. ANDRITZ is also committed to observing all ILO conventions in connection with occupational health and safety.

Safety in day-to-day work

Safety not only comprises regulations, guidelines and goals, but should also be lived on a daily basis in the company. This is why managers and executives are personally responsible for safety at their location.

Safety begins with the establishment of a local network of health and safety experts who define and promote a culture of safety. A safety expert must be appointed as from a certain location size. This also applies to larger job sites. It is the responsibility of the local safety team to compile an emergency plan.

One of the central tasks of the local safety team is to develop and implement an annual health and safety program. Implementation of the goals defined there should achieve continuous improvement of the safety culture. The respective measures and projects are registered and undergo an auditing process at regular intervals. Ideally, they lead to a safety management system according to international standards (e.g. ISO 45001). The documentation on measures applied and target achievement is compiled as part of a quarterly or annual safety report.

All incidents and accidents are recorded, investigated and analyzed – irrespective of their severity. Furthermore, injuries that result in absences from work must be documented in a group accident data base and a “lessons learned” report must be issued and published in the intranet. Experience gathered from actual incidents and near-accidents as well as good/best practices should thus be collected and used by everyone to improve the safety culture.

The accident figures from the past few years document that the ANDRITZ GROUP's initiatives regarding safety are showing positive results. Accident figures are falling although there is still room for improvement in individual sectors. There were no fatal accidents in the past year.

Industrial accidents

	2019	2018
Accidents at work (with more than three days of absence)	223	210
Accident frequency (accidents with more than three days of absence per 1 million working hours)	3.8	4
Accident frequency (accidents causing one or more days absence per 1 million working hours)	6.1	6.2
Fatal accidents at work	0	1
Severity of accidents (absence periods in hours per accident)	166	155
Number of medical treatment injuries at work	1,180	1,539

A regular check on the efficacy of the safety programs, accident analyses and appropriate handling of accidents and faults as well as controlled communication thereof at all management levels are obligatory. The exact intervals for audits and inspections are defined in the Group Health and Safety Management Policy.

The executives must ensure that all employees have knowledge of the policies and safety processes at the respective location. The safety instructions (regulations) that must be strictly observed should be issued personally if possible. A safety tour should be conducted at least once every quarter to inform employees once again personally on how important this topic is. This safety tour must also be documented.

Regular training is provided In order to meet the professional and statutory requirements and guarantee a good understanding of possible dangers and appropriate protective measures. Each location must compile a qualification matrix and an annual safety training schedule.

Subcontractors are also involved in safety efforts. They are selected on the basis of certain criteria and assessed to establish whether they can perform the work contracted safely. Contractors and third parties who enter ANDRITZ locations must have received sufficient information and training on the topic and also be appropriately equipped to perform their work safely. Performance by third parties, including their management, is monitored and assessed, feedback is provided and deficiencies are corrected.

Manufacturing

Around 150 manufacturing locations worldwide¹ produce tailor-made key components, plants and systems as well as spare and wear parts for ANDRITZ plants and machinery. Around two thirds of these locations are in Europe and North America and one third in China, Asia, and South America.

Each location manufactures very flexibly for individual projects and orders, usually for different and sometime also for several business areas. The manufacturing strategy thus aims to produce critical key components in terms of technology and quality in ANDRITZ's own production shops. Everything else is largely purchased from qualified suppliers.

With this procedure, it is possible to compensate effectively for fluctuations in workload and make optimum use of manufacturing capacities. Precise planning, high commitment, and very flexible employees are essential factors to ensure short lead times and on-time production.

Investments are concentrated on the one hand on building up and expanding manufacturing capacities in the emerging markets of Asia and South America as well as in Eastern Europe and on modernizing existing locations in Central Europe and North America on the other hand.

Optimization and improvement projects in manufacturing also focus on careful handling of the resources available and automation of processes in addition to adapting process management to exact planning. One of these projects is the Manufacturing Execution System (MES), which aims to steer, control and monitor manufacturing in real time.

With this system, it is possible to link all important information on planning, lead time, and costs as well as machinery and operating data on one platform, and the system can be adapted to local requirements if necessary. MES is also a component for further developments in the digitalization sector. This is currently being implemented in the manufacturing shops in Graz and Weiz as a pilot project. Other locations use similar solutions from several compounded parts of the program, but these are not integrated.

Another important step towards digitalization and improvement in manufacturing is the introduction of the Celonis process mining system at the production locations. This specially configured software provides a digital process analysis of all manufacturing orders in order to identify weaknesses and implement improvement programs efficiently.

The most important approach to continuous improvement of the manufacturing processes is the ANDRITZ Production System (APS), which has already been in successful use for some time now. First of all, improvement potentials are sought out at the production locations and assessed. During the implementation of shop floor management, communication at and between locations was improved, more transparency was created, and efficiency was increased in the long term. Production processes can only be optimized by training suitable professional skills, which is why a lean training program was also launched. The Lean Leadership (for executives in the manufacturing sector) and Lean Practitioner (for foremen and team leaders) training modules are currently in use. Lean Practitioner training is conducted in the respective national language at the various manufacturing locations worldwide and focuses on practical use of "lean" methods on the shop floor, with the goal of maximizing the value-added share and avoiding wastage in the processes.

¹ Including ANDRITZ Fabrics & Rolls (former Xerium). The figures for manufacturing by Fabrics & Rolls are at the moment only available for the largest manufacturing location in Gloggnitz, Austria.

Key energy figures

The environmental data for the largest ANDRITZ production locations (80% of the overall annual manufacturing capacity) are surveyed and checked on a regular basis and then used to develop possible improvement measures. The key consumption figures are based on projected approximate values to maintain comparability as the complete figures for the 4th quarter of 2019 were not all available before the copy deadline. Due to adjustments made to the consumption figures, the retrospective changes have resulted.

54% of all the manufacturing facilities surveyed are in Europe, 25% in North America, 8% in South America, 8% in China, and 6% in India and/or Indonesia. Thus, the most electricity is consumed at the locations surveyed in Europe, followed by North America, China, India and South America.

The Group's overall electricity consumption increased compared to the previous year and amounted to 210.134.774 kWh (2018: 194.824.567 kWh). Around 83% of the Group's electricity consumption is attributable to manufacturing operations, mostly for the production processes. The remaining electricity consumption is used for lighting, IT equipment, and for electric heating where needed. All six main groups of manufacturing processes are used at all ANDRITZ locations worldwide: forming and casting mainly uses electrical equipment, particularly induction furnaces. The other processes, such as rolling, pressing, machining, welding, weaving, soldering and gluing are also performed with the aid of electrically powered machines. Only hardening and annealing processes use gas-powered machinery. As a general principle, the production processes in the ANDRITZ GROUP are less energy-intensive (except for one location in North America which has a foundry attached to it).

Energy consumption within the organization

The bulk of energy and fuel consumption (heating oil, natural gas, district heating) is used for heating company premises. In addition, a few production processes require oil, for example to heat the presses. Natural gas is needed in production primarily to operate hardening and annealing furnaces. Gasoline and diesel fuel are needed for company vehicles, while liquefied gas is required to operate stacker trucks and, in some countries also for company vehicles.

Energy consumption within the organization*

	Unit	2019	2018
Externally procured heating		34,235,862	34,305,773
District heating	kWh	34,235,862	34,305,773
Non-renewable energy carriers for heating		433,295,879	425,464,239
Light fuel oil	MJ	5,110,838**	25,506,434
Natural gas	MJ	428,185,041**	399,957,805
Non-renewable energy carriers for process heating		312,454,283	202,560,464
Oil***	MJ	827,408	353,735
Gasoline	MJ	2,331,046	3,100,909
Diesel	MJ	16,109,565	16,377,941
Diesel for emergency generator****	MJ	3,609,452	4,473,111
Natural gas	MJ	278,580,346	165,772,061
Liquid (petrol) gas	MJ	10,996,466	12,482,707

* The key consumption figures are based on projected approximate values to maintain comparability as the complete figures for the 4th quarter of 2019 were not all available before the copy deadline. Due to adjustments made to the consumption figures, the retrospective changes have resulted.

** The decrease or increase compared to the previous year is due to the fact that two major sites switched from oil to gas heating. In addition, some locations were newly integrated into the reporting.

*** Retrospective change in consumption figures 2018 as one location no longer requires heavy oil to heat its presses. This also results in the increase in natural gas in 2019.

**** At two Indian locations for electricity supplies at shortages

ANDRITZ strives to reduce energy and fuel consumption in the production process. Annual fluctuations in consumption are largely due to the varying workload and make very detailed comparisons with previous years difficult.

Direct emissions (Scope 1, mainly from manufacturing) amounted to 22,452 tonnes of CO₂ equivalents in 2019 (2018: 24,985 t CO₂e), while indirect emissions (Scope 2, from the consumption of purchased electricity, heat or steam) amounted to 75,411 tonnes of CO₂ equivalents in 2019 (2018: 68,365 t CO₂e). The collection of Group-wide data for Scope 3 (mainly indirect emissions resulting from business travel by air and other means of transport) is planned for 2020.

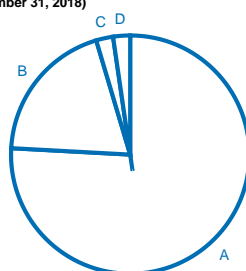
Resources are valuable and not unlimited. That is why particular attention is paid to conservation and re-use of materials. The important factors are the efficient use of materials and keeping waste to a minimum on the one hand, and economical energy consumption in material processing on the other hand. The largest share of waste comes from steel from the manufacturing process. Metal waste is separated into different types and then recycled. Other recyclable materials like plastic from packaging, waste from wooden crates and cardboard packaging, as well as waste paper are collected and recycled. Non-hazardous residual waste and hazardous waste are collected according to the legal provisions and taken away by disposal companies. Special attention is paid to observing all official regulations and record-keeping obligations, particularly when disposing of hazardous substances.

Water consumption

Water consumption in the past year was 660,932 m³ (2018: 708,125 m³). The water supply comes primarily from the public water system, but a few locations also recycle service water or take water from their own wells. Water consumption consists of process water for production plants (including cooling water) as well as water for drinking and for hygiene purposes. A small amount is also needed for hydraulic test stands. Service water is used in some cases to generate steam or cool annealing furnaces, or it evaporates in air-conditioning plants, which is why the waste water quantity is not the same as the amount of water fed in.

**Water consumption in manufacturing
as of December 31, 2019 in %**

(December 31, 2018)



A	76	(88)	Tap water
B	20	(5)	Ground water
C	2	(5)	Surface water
D	2	(2)	Rain water

Digitalization

ANDRITZ Ventures (AV) handles innovations and startups group-wide, providing support to the business areas in their innovation and digitalization activities. AV seeks out cooperations, strategic partnerships or investments in startups that further strengthen or broaden ANDRITZ's technology portfolio. Smart sensors, artificial intelligence and business intelligence solutions are some examples of this. Thanks to the experience and capacities of the ANDRITZ GROUP, AV is able to offer both sound industry expertise as well as global positioning to support startups and develop market-changing solutions together.

In addition, there are several internal initiatives to promote and support innovations and other undertakings. For example, two ANDRITZ Ventures startup competitions have been held with over 60 entries, and several of the projects are already in the implementation phase. The competition is a structure program inviting all employees to submit, develop and launch innovative new products, services and business models on the market. ANDRITZ Ventures has also initiated formats like "hackathons", "makerthons", technology talks and innovation workshops in order to facilitate the development of new business models and support an exchange of knowledge on high-tech trends.

Research & development

At ANDRITZ, sustainability stands above all for solutions that help customers to achieve their sustainability goals and make use of resources as economically and efficiently as possible. Research and development work thus also concentrates to a large extent on developing products of this kind. In the past few years, a series of products were developed that contribute towards sustainability. Hence, a significant share of sales is achieved with technologies and systems to generate energy from renewable resources and waste products, thus also helping to conserve resources.

HYDRO

Hydropower: Electromechanical equipment for hydropower plants (32,000 turbines with a total output in the region of 457,000 megawatts have been installed or refurbished to date)

Modernizations and retrofitting of new turbines and generators

Offshore solutions: Tidal current turbines, tidal lagoon hydropower plants

Pumps for water transport, irrigation of agricultural land, and applications in various industries

Highly efficient turbogenerators for thermal power stations (modern gas turbine plants are much more efficient than the old ones using fossil fuels and they also help to lower the CO₂ emissions from power generation)

PULP & PAPER

Recovery boilers that incinerate the black liquor occurring in pulp production as well as recovering the chemicals needed for pulping and making the steam thus generated suitable for use in power generation

Steam generating plants that make the biomass (e.g. bark) from pulp production and the waste materials produced in paper recycling suitable for use in power generation

Biomass boilers: Fluidized bed boilers that make it possible to produce energy from different types of biomass, for example, and to generate heat from biomass and biogenic residues and waste

Gasification plants in which only renewable fuels are used to generate energy by means of carbonization or pyrolysis

Drying and pelleting of biomass: Complete solutions for generating energy from biomass

Generating energy with waste materials from the papermaking process: Rejects, sludges and other residual materials are converted into fuel

Recycling technologies ranging from complete plants to single equipment and services for the processing of various waste streams: Rejects from the pulp and paper industry, electronic/electrical waste and refrigerators, cable scrap and metals, end-of-life vehicles and tires, wood waste, organic waste, as well as domestic and industrial waste

Flue gas cleaning plants; wet and dry cleaning processes for acidic pollutant gases, plants to reduce nitrogen oxide emissions and combinations of complex flue gas cleaning technologies: Used in power plants, biomass plants, waste incineration plants, and various industrial applications

Exhaust gas cleaning for maritime vessels: ANDRITZ has developed the SeaSOx scrubber technology for the maritime industry. It can be installed on all types of ships, either on a new build or retrofit basis

METALS

Schuler ECOFORM – a collection of measures to increase the energy efficiency of products: From analysis and optimization of existing machines to the development of new processes, modules, and system solutions

Acid reduction in the production of stainless steel: The Pyromars process treats the waste pickle to produce a re-usable mixed acid regenerate. The ZEMAP plant concentrates the remaining acidic waste water from rinsing and pickling, which is then recovered in the Pyromars process.

Recycling of electrical and electronic scrap: The secondary copper mini-smelter enables reuse of copper alloys and recycling of copper scrap. Both base metals and precious metals can be recycled

Lightweight automotive construction: Welding plants to manufacture tailored welded blanks, particularly to combine hot-forming steel grades of different strengths, and hot stamping lines to manufacture stronger and lighter automotive parts

Low and ultra-low NOx burners are used in the steel and aluminum industries to reduce nitrogen emissions

SEPARATION

Municipal and industrial waste water treatment: Systematic and efficient treatment reduces water and energy consumption and conserves raw materials

Thermal sludge treatment – Dried sludges have a much higher calorific value and up to 80% less volume, which leads to reduced transport and operating costs. It provides marketable residual material that can be used as renewable energy source.

Waste recycling – Treatment and fermentation of waste for the production of biogas

Production of biomass pellets

The ANDRITZ GROUP spent 115.0 MEUR (2018: 108.9 MEUR) on research and development activities during the reporting period. Research and development expenses, including order-related work, amounted to around 3% of sales. In the past business year, the development activities of Otorio were also included for the first time. The strategic ANDRITZ partner based in Tel Aviv offers a wide range of state-of-the-art cybersecurity products and services. The RAM2 platform developed by Otorio automates and controls all IT/OT security tasks of plants or systems, including cybersecurity risk evaluation and risk mitigation recommendations.

The ANDRITZ GROUP holds approximately 6,500 patent rights. 75% of these patent rights have already been granted, the remaining part is under examination. In addition the Group owns 2,550 trademarks.

The following selected projects from the business areas represent a part of the diverse research and development spectrum of the past business year.

Pulp & Paper

In the past few years, chemical loops in pump mills have been closed in order to reduce emissions and waste water volumes. However, this often involves an accumulation of certain chemicals and causes by-product and waste streams to form that again have to be disposed of. One of these chemicals is methanol, a by-product from pulp production.

These circumstances led to development of the A-Recovery+ chemical recovery system. The biomethanol cleaning plant is based on a patented extraction process in which raw methanol is purified to obtain commercially available biomethanol. Raw methanol is frequently used as an alternative fuel in pulp mills and burned in the recovery boiler, for example. However, biomethanol can also be used in shipping, for example, as a stand-alone fuel, as well as for the production of biodiesel, as an additive in petrol, or as a raw material in the chemical industry. The biomethanol produced complies with the commercially available reference specifications and takes another step towards operating a pulp mill without using fossil-based fuels because it replaces the fossil-based methanol currently used.

ANDRITZ has several innovative technologies for the manufacture of sustainable products in its Nonwoven and Textile portfolio. In the manufacture of wet wipes, for example, a technology is used that combines wet forming with hydroentanglement. This is particularly suitable for the production of rinsable wet wipes, which are water-soluble, 100% biodegradable and without chemical binders.

AVA – Advanced Visual Analysis

The AVA technology transforms pictures (of industrial plants for example) into numerical data for process optimization and problem solving. If information is not available in numerical form, it cannot be used for smart control, trending, and so on. In the meantime, a platform has been developed that contains five visual analysis tools for recovery boilers and two tools for monitoring wood storage areas.

Hydro

In addition to structural changes, the market also holds many challenges that have to be overcome, such as market liberalization, volatile energy prices, basic and peak demand levels, volatility of wind and solar energy production, or changes in consumer behavior.

Hybrid energy solutions are a possible approach to overcoming these challenges. In the energy market, these solutions comprise a combination of one or several power generating technologies with at least one renewable energy source and one energy storage system. This guarantees a supply with maximum reliability.

In addition to large-scale hybrid solutions, ANDRITZ Hydro has launched a hybrid energy solution called “HyBaTec” on the market that combines a water turbine and generator unit with a storage battery. The system can

be used for newly built hydropower stations and also to retrofit existing plants and covers battery capacities from 100 kWh to 10 MWh. It can expand operations by up to 25% – compared to conventional hydropower stations and with the right size of battery. HyBaTec significantly reduces mechanical stress in the plants, enables faster reaction times and offers very flexible operation – without existing restrictions from electrical, mechanical or hydraulic limits – thanks to the interaction of the generating unit and the battery.

Metals

ANDRITZ Metals is making significant progress in the use of digital applications. In order to meet market requirements, ANDRITZ has developed an innovative solution for controlling annealing furnaces – Advanced Furnace Control (AFC). The AFC software enables better control of the heating and cooling process as well as exact prediction of the temperatures. The innovative AFC technology has already proved very successful – technology leaders in the metal industry use AFC in their production processes. The new control concept, which makes it easier to take all of these challenges into account, uses model-supported predictive control of the temperature. It is suitable for complex systems, such as annealing furnaces, and considers increases in throughput, minimization of energy consumption and minimization of CO₂ emissions.

ANDRITZ Metals leads the technology for processing high-strength steel grades for the car body generations of today and also tomorrow. The main focus here lies on reducing weight even further in order to lower emissions.

Schuler

Schuler has combined a series of solutions for networking the press shop under the name “Smart Press Shop”. Current developments include the mySchuler platform, a portal to process and display current production and operating data for servopresses as well as the camera-based visual die protection. The mySchuler portal also shows the current stroke number, pressing force and status of the main drives and the cooling and lubricating loops. This means that possible deviations can be detected at an early stage and eliminated quickly. The visual die protection system not only uses cameras to detect foreign elements, such as wrenches or punching residue, but also sees whether the tool has been connected up correctly and the blanks have been inserted, formed and removed again properly. It also sees any cracks in the component or possible damage to the centering and ejector pins. If a deviation is detected, the press is stopped immediately.

Separation

The strategic innovation target of the past year was to achieve growth by developing IIoT applications and suitable business models.

This is why Separation launched the Metris addIQ control systems for filter presses on the market at the beginning of 2019. In addition, the intelligent filter press was launched, with functions like optimization of cycle time and process, quality monitoring and filter cloth management, as well as Metris addIQ ACE for optimum use of several filter presses via a tool for artificial intelligence. In addition to mechanical innovations on the filter press, this also enables process optimization, predictive maintenance and industrial digitalization.

Metris addIQ control systems are also available now for contact drum dryers and paddle dryers with new functions, including servo-controlled setting of the applicator roll gap for maximum performance and highest product quality.

Another solution known as SmartClean and launched for the service market this year provides up to ten percent more machine availability for horizontal peeler centrifuges thanks to optimum cleaning at the machine, which results in increased product quality and cost savings.

Automation

With its implementation of the new Metris UX Platform, ANDRITZ Automation is reacting to the increasing market demand for vendor-independent solutions. The software-based structure was created in order to provide an all-in-one database with AI (artificial intelligence) capabilities. The architecture of the ANDRITZ digitalization platform Metris UX features apps and services that enhance customers' performance by using business intelligence.

The fully integrated but also individual automation solution Metris X was launched as part of the Metris UX Platform. This newly developed system runs hardware independent and is suitable both for new plants and for retrofits. The software architecture reflects automation and IT know-how and complies with the latest technological standards. The first tests on industrial scale in the pulp and paper industry have now been successfully completed. For example, Metris UX has been installed at the Mondi paper mill in Štětí, Czech Republic, also with a Metris X distributed control system.

The newly opened Metris Performance Center at the ANDRITZ headquarters in Graz, Austria, is an example of the trend towards advanced customer interaction. In addition, the developments in condition monitoring, like the Metris Vibe Sensor including the Metris Vibe app, are designed to make ANDRITZ a globally leading supplier in the automation sector for the complete process industry.

For many industries, digitization means using potentials for process and result optimization. By linking and analyzing relevant machine data, considerable cost advantages can be achieved. This is why ANDRITZ started to develop suitable solutions back in 2007 and offers Metris OPP, an internationally proven and highly efficient program for optimizing production processes in a wide range of industries and plant types.

OUTLOOK

Economic experts expect a moderate and largely unchanged general economic environment worldwide in 2020 compared to 2019 (GDP growth in 2019: approximately 2.9%). The impact of the trade dispute between the three large economic regions – the USA, China and Europe, the Brexit as well as the global weakness of the automotive market will also put a strain on the global economy and prevent any significant increase.

In view of this expected economic environment, the outlook and expectations for the ANDRITZ business areas have not changed substantially compared to the previous year. In the Pulp & Paper business area, unchanged good project and investment activity is expected overall in 2020, but below the extraordinarily high level of 2019. Above all, good development is also expected in the service sector in the coming year.

In the Metals business area, unchanged low investment activity by international car manufacturers and their suppliers compared to 2019 is expected in the Metals Forming sector (Schuler). From today's perspective, only a small number of large-scale orders will be awarded. Moderate project and investment activity is also anticipated in the Metals Processing sector (plants for production and finishing of steel strip). Unchanged strong competition is expected both in Metals Forming and in Metals Processing in view of the difficult economic environment.

Continuing moderate project and investment activity is also expected in the Hydro business area. Only selective award of individual large-scale projects is expected.

In the Separation business area, the good project and investment activity is expected to continue in 2020 as well, with a good market environment in the municipal sector and the food industry in particular.

In 2020, ANDRITZ will focus once again on promoting internal growth by introducing new products and by examining opportunities to acquire companies that extend the product portfolio in the four business areas. An additional focus lies on optimization of organizational and cost structures in order to ensure the overall competitiveness of the Group, but also of individual business areas, and to increase profitability sustainably.

From today's perspective, the ANDRITZ GROUP expects an increase in sales for 2020 compared to the previous year. The main reasons for this are the very high order backlog as of the end of 2019 as a result of the good order development in the reporting period. In the Pulp & Paper business area in particular, a significant increase is expected in sales due to processing of some large-scale orders. In spite of the increase in sales, the operating result before extraordinary effects (EBITA) is only expected to reach the same level as in 2019 (before extraordinary effects).

The main factors influencing the earnings forecast are an increased share of sales from lower-margin, large-scale projects in the Pulp & Paper business area compared to 2019 and the weak earnings development in the Metals business area as a result of the unchanged, difficult market situation in the automotive industry. The restructuring measures already announced for this sector are going according to plan, but will not have any appreciable impact on earnings before the end of 2020. Unchanged, solid and stable profitability development is expected in the Hydro business area, and a further improvement in earnings and profitability is expected for the Separation business area in 2020 compared to 2019.

However, if the global economy suffers an unexpected sharp slowdown in 2020, this could have a negative impact on ANDRITZ's business development. The impact of the virus Covid-19 on the Chinese as well as the global economy cannot be estimated at present and were not taken into account in the above market expectations for the business areas and the sales and earnings forecast of the ANDRITZ GROUP. However, if the situation worsens as the year goes on, market experts expect this to have a negative impact on the global economy. ANDRITZ has numerous manufacturing facilities in China and maintains many business relationships with local Chinese

suppliers. China accounts for an average of around 15% of the ANDRITZ GROUP's annual sales. If the situation remains unchanged in the course of the year or becomes even worse, this could have a substantial negative impact on the ANDRITZ GROUP's business development.

In addition, possible further capacitive adjustments that are necessary due to the market environment in individual business areas may result in financial measures for capacity reductions. These provisions could have a negative effect on the ANDRITZ GROUP's earnings.

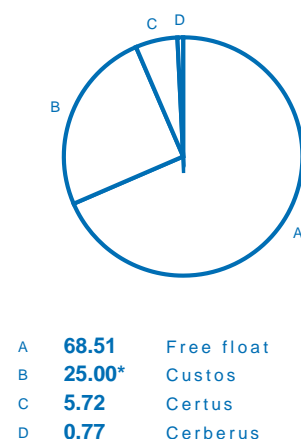
SHARES AND SHAREHOLDER STRUCTURE

Disclosure according to Article 243a of the Austrian Commercial Code (Unternehmensgesetzbuch – UGB)

The capital stock of ANDRITZ AG as of December 31, 2019 amounted to 104,000,000 EUR. The proportionate amount of the capital is 1.00 EUR per no-par value share. There are no limitations concerning the voting rights or the transfer of shares.

ANDRITZ has a stable and well-balanced shareholder structure. Custos Vermögensverwaltungs GmbH owns 25% plus one share, while Cerberus Vermögensverwaltung GmbH holds 0.77%. Some of the shares in these companies are held directly and some indirectly by Custos Privatstiftung and by Wolfgang Leitner, President and CEO of ANDRITZ AG, respectively. Certus Beteiligungs-GmbH, whose shares are owned indirectly by Manile Privatstiftung, holds 5.72%. The Takeover Commission has decided that, pursuant to § 23 (2), line 1 Takeover Act, the shares of Certus Beteiligungs GmbH are attributable to Custos Privatstiftung. With a free float of just under 70%, national and international institutional investors and private investors comprise the majority of shareholders. The majority of institutional investors come from the UK, Austria, and Germany, while most private investors are from Austria and Germany.

Shareholder structure
as of December 31, 2019 in %



* 25.00% + 1 share

At present, there is no authorized capital. The General Meeting held on March 23, 2018, authorized the Executive Board to purchase treasury shares up to the maximum amount permitted by law for a period of 30 months as from October 1, 2018, and to cancel these company shares where appropriate with the approval of the Supervisory Board without having to consult the Annual General Meeting. There is no authorization of the members of the Executive Board – especially regarding the possibility of issuing or buying back shares – that does not result directly from legal stipulations.

The Executive Board and Supervisory Board of ANDRITZ AG resolved on December 18, 2018, to make use of the authorization from the Annual General Meeting to buy back shares. The resolution states that up to 1,000,000 ANDRITZ shares (equal to 0.96% of the share capital) shall be purchased through the Vienna Stock Exchange between December 27, 2018 and June 30, 2019. The Executive Board of ANDRITZ AG announced on July 1,

2019, that the buy-back program had been concluded as planned as of June 30, 2019. A total of 989,500 ANDRITZ shares (equal to 0.95% of the share capital) were purchased through the Vienna Stock Exchange.

The Executive Board and Supervisory Board of ANDRITZ AG resolved on July 1, 2019, to make use of the authorization from the Annual General Meeting once again to buy back shares. Up to 1,000,000 ANDRITZ shares (equaling 0.96% of the total outstanding shares) are to be repurchased through the Vienna Stock Exchange between August 2, 2019 and February 3, 2020.

As far as is known to the company, there are no holders of shares with special controlling rights. Employees exercise their voting rights directly. Furthermore, there are no stipulations regarding the appointment and removal of the members of the Executive Board and the Supervisory Board, nor regarding modifications of the company's Articles of Association that do not result directly from legal stipulations.


There are no significant agreements in which the company participates that would become effective, change, or end in the event of a change in the control of the company following a takeover bid.

According to the terms of the "Schuldscheindarlehen" issued in June 2017, August 2018, and May 2019, each lender is entitled to accelerate maturity of the amount corresponding to his contribution to the "Schuldscheindarlehen" and to require immediate repayment of this principal amount plus the interest accumulating up to the day of repayment in the event of a change of control. Acceleration of maturity shall only apply if the corresponding notice of termination is made within 30 days after the change of control is announced.


Compensation agreements exist between the company and members of its Executive Board in the event of a change of control. No such compensation agreements exist for the members of the Supervisory Board or any employees.


Graz, February 21, 2020


The Executive Board of ANDRITZ AG


Wolfgang Leitner
President and CEO


Humbert Köfler
Pulp & Paper
(Service),
Separation


Norbert Nettesheim
CFO


Joachim Schönbeck
Pulp & Paper
(Capital Systems),
Metals Processing


Wolfgang Semper
Hydro

Disclaimer:

Certain statements contained in the annual financial report 2019 and in the annual report 2019 constitute "forward-looking statements." These statements, which contain the words "believe," "intend," "expect," and words of a similar meaning, reflect the Executive Board's beliefs and expectations and are subject to risks and uncertainties that may cause actual results to differ materially. As a result, readers are cautioned not to place undue reliance on such forward-looking statements. The company disclaims any obligation to publicly announce the result of any revisions to the forward-looking statements made herein, except where it would be required to do so under applicable law.

The annual financial report 2019 and the annual report 2019 contain assumptions and forecasts which were based on the information available up to the copy deadline on February 21, 2020. If the premises for these assumptions and forecasts do not occur, or risks indicated in the chapter "corporate risks" and in the management report in the annual financial report 2019 do arise, actual results may vary from the forecasts made in the annual financial report 2019 and the annual report 2019. Although the greatest caution was exercised in preparing data, all information related to the future is provided without guarantee.

CONSOLIDATED CORPORATE GOVERNANCE REPORT

The present report explains the structures, processes, and rules implemented with respect to financial management and towards shareholders, and which ANDRITZ follows in the corporate governance sector. As a publicly listed company with headquarters in Austria, the formal framework for corporate governance is derived from Austrian law, the articles of association, and the rules of procedure for the company boards, as well as the Austrian Code of Corporate Governance. The present report also contains the consolidated Corporate Governance report.

Commitment to the Austrian Code of Corporate Governance

ANDRITZ has adopted the rules of conduct laid down in the Austrian Code of Corporate Governance without restriction and regards the Code as an essential requirement for implementation of responsible company management, which is directed towards creating sustainable and long-term added value and a high degree of transparency for shareholders and other stakeholders. The Executive Board and the Supervisory Board as well as the entire staff of the ANDRITZ GROUP have committed to complying with the Code.

The Austrian Code of Corporate Governance applicable to the business year (January 2020 edition) is publicly accessible and available on the website of the ANDRITZ GROUP at andritz.com as well as on the website of the Austrian Working Group for Corporate Governance at corporate-governance.at.

The Austrian Code of Corporate Governance is based on a voluntary commitment and goes beyond the legal requirements for corporations. ANDRITZ obeys the rules of the Code almost entirely. In the interests of the basic principle of "Comply or Explain" in the code, ANDRITZ justifies its non-observance or non-compliant observance of those rules that go beyond the legal requirements (so-called C-rules) as follows:

Rule 30 (Disclosure of the basic principles of the remuneration system for the Executive Board): The variable portion is based exclusively on the net income; there are no non-financial criteria that impact the extent of the variable remuneration. The ANDRITZ GROUP operates in business areas that show considerable differences in some respects, which is why it is only useful to a limited extent to define uniform non-financial criteria for the entire Group. This fulfills the requirements of the objectivity and clear traceability concepts. The sustainability aspect was taken into account in designing the 2018 stock option program by including a three-year waiting period and the criteria of the increase in operating profitability (expressed as the EBITA margin) to an average of 8% and an increase in share price of 10 and 15%, respectively. Both targets (increase in operating profitability and increase in share price) must be achieved in order to exercise the options.

Composition of the Executive Board

The Executive Board of ANDRITZ AG was composed of five members as of December 31, 2019. Mark von Laer, who was CFO of ANDRITZ AG as from March 1, 2017, stepped down from the Executive Board on December 5, 2019. The Supervisory Board has appointed Norbert Nettesheim as his successor, effective as of December 6, 2019.

Name (date of birth)	Function	Date of first appointment to Executive Board	End of current mandate	Supervisory Board mandates in other companies in Austria and abroad
Wolfgang Leitner (March 27, 1953)	President & CEO	October 1, 1987 (CFO) June 29, 1994 (President & CEO)	June 28, 2023	Schuler AG; ETI Elektroelement d.d.
Humbert Köfler (January 11, 1961)	Member of the Executive Board	April 1, 2007	March 31, 2020	None
Norbert Nettesheim (November 17, 1962)	Chief Financial Officer (CFO)	December 6, 2019	September 30, 2022	Groz-Beckert KG
Joachim Schönbeck (January 30, 1964)	Member of the Executive Board	October 1, 2014	September 30, 2022	None
Wolfgang Semper (March 9, 1958)	Member of the Executive Board	April 1, 2011	March 31, 2024	None

Wolfgang Leitner

Areas of responsibility

Central group functions such as Human Resources Management, Corporate Communications, Investor Relations, Internal Auditing, Information Technology, Manufacturing Management, and Metals Forming

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

Humbert Köfler

Areas of responsibility

Pulp & Paper (Service), Separation

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

Norbert Nettesheim

Areas of responsibility

Central group functions such as Controlling, Treasury, Order and Project Financing, Legal, Compliance, and Global Purchasing

Professional career

Managerial positions at the Voith Group, including the position of commercial director of the paper technology division as well as in various operating group companies and most recently as head of Group Controlling, Accounting and Investments at the Voith Group.

Joachim Schönbeck

Areas of responsibility

Pulp & Paper (Capital systems), Metals Processing, as well as group-wide Quality and Safety Management

Professional career

Spokesman of SMS Holding GmbH and Chairman of the Management Board of SMS Meer GmbH, management positions at SMS Group, Siemens, and Mannesmann

Wolfgang Semper

Areas of responsibility

Hydro and group-wide Automation

Professional career

President of ANDRITZ HYDRO GmbH and Head of the Large Hydro division of the Hydro business area, management functions at VA TECH VOEST MCE and Voest-Alpine MCE, Technical Calculations Engineer at Voest-Alpine AG

Composition of the Supervisory Board

The ANDRITZ AG Supervisory Board consists of six appointed members representing the shareholders and three members delegated by the works council.

Name (date of birth)	Function	Date of first appointment	End of current mandate	Supervisory Board mandates in other (stock-exchange listed) companies in Austria and abroad
APPOINTED MEMBERS				
Christian Nowotny (July 23, 1950)	Chairman of the Supervisory Board	December 29, 1999	Until the Annual General Meeting in 2022	Schuler AG
Fritz Oberlerchner (June 16, 1948)	Deputy-Chairman of the Supervisory Board	March 29, 2006	Until the Annual General Meeting in 2020	None
Jürgen Hermann Fechter (November 30, 1962)	Member of the Supervisory Board	March 30, 2016	Until the Annual General Meeting in 2021	None
Alexander Isola (July 24, 1957)	Member of the Supervisory Board	March 30, 2016	Until the Annual General Meeting in 2021	None
Monika Kircher (July 8, 1957)	Member of the Supervisory Board	March 21, 2014	Until the Annual General Meeting in 2023	RWE AG
Alexander Leeb (May 16, 1959)	Member of the Supervisory Board	March 27, 2019	Until the Annual General Meeting in 2023	Mayr-Melnhof Karton AG
DELEGATED MEMBERS				
Georg Auer (October 12, 1974)	Member of the Supervisory Board	July 1, 2011		None
Andreas Martinier (November 11, 1964)	Member of the Supervisory Board	February 14, 2001		None
Monika Suppan (January 26, 1974)	Member of the Supervisory Board	January 1, 2018		None

Diversity

The main criteria in selecting the members of the Supervisory Board are professional qualifications and personal skills, as well as long-term experience in leading positions. However, various diversity aspects, such as the internationality of the members, representation of both men and women, and the age structure, are also taken into account. The Supervisory Board has two female members, thus the proportion of women is approximately 22%. The members of the Supervisory Board are aged between 45 and 71 on the reporting date. One member is not an Austrian citizen and has knowledge and experience gained as a former Executive Board member of a large German corporation operating globally.

Information relating to the independence of the Supervisory Board members

Regarding the independence criteria, the Supervisory Board of ANDRITZ AG follows the guidelines laid down in the Corporate Governance Code. According to these guidelines, it is assumed that members are not independent if they belong to the Supervisory Board for more than 15 years. This applies to Christian Nowotny. Nevertheless, he has confirmed that he performs his duties entirely independently and does not have any legal or economic relationship with the company or its executive bodies that could compromise his independence. The Supervisory Board is independent of the company and its executive bodies. No member of the Supervisory Board of ANDRITZ AG holds more than 10% of the total shares. The requirements of C-rules 53 and 54 of the Austrian Code of Corporate Governance are thus met.

Disclosure of information on the remunerations of the Executive Board and Supervisory Board

The remuneration report explains the amount and the structure of the remunerations paid to members of the Executive Board and of the Supervisory Board of ANDRITZ AG.

Executive Board remunerations

The Executive Board remunerations in the 2019 business year amounted to 7,152,817 EUR (2018: 8,826,987 EUR) and are divided as follows:

(in EUR)	Fixed	Variable	Other remunerations	Total
Wolfgang Leitner (President and CEO)	860,000	1,264,600	13,726	2,138,326
Humbert Köfler	400,000	682,112	11,982	1,094,094
Norbert Nettesheim	100,000	132,000	9,179	241,179
Joachim Schönbeck	450,000	635,866	13,506	1,099,372
Wolfgang Semper	407,143	655,850	13,996	1,076,989
Mark von Laer (retired from the Executive Board as of December 5, 2019)	373,264	515,938	613,655	1,502,857
	2,590,407	3,886,366	676,044	7,152,817

The chairman of the Executive Board Wolfgang Leitner waived his remuneration as chairman of the Schuler AG Supervisory Board.

Basic principles of the remuneration policy

The principles applied in establishing the remunerations of the Executive Board and of senior managers comply almost entirely with the Austrian Code of Corporate Governance.

The remuneration of the Executive Board comprises a fixed payment (basic salary) and a variable performance bonus that depends on the net profit. The maximum value for the variable annual remuneration was determined at three times the fixed annual remuneration. Any amounts in excess of this sum will be credited as a variable remuneration for the following three years. If the net income of the Group falls short of a defined minimum amount, this results in a "malus" (negative bonus) that is also carried forward to the following years and in a reduction in future variable salary components. If there is a "negative bonus" at the time of leaving, this reduces the entitlements existing upon leaving. The other remunerations relate primarily to taxable benefits in kind for company cars.

The variable components of the remuneration do not differentiate between the individual Executive Board members in determining the Executive Board remunerations. The relevant factors are the overall responsibility of the Executive Board and the economic interaction between the individual business areas. In determining the fixed salary components, the Supervisory Board takes account of the duties and professional experience of the individual Executive Board members, the status of the company and the amounts customary for such remunerations. Due to his special responsibility and significance for the company, the chairman's remuneration is correspondingly higher. Moreover, the chairman also has a different pension scheme. By conducting a horizontal remunerations comparison with other industrial companies in Austria and Germany, Executive Board remunerations are obtained that are in line with market requirements and also competitive in order to attract and motivate the best qualified executive board members and also tie them to the company. Furthermore, the terms of remuneration and employment for the company's employees are taken into account in order to position the Executive Board's remunerations in suitable relation to the remuneration structure of the company.

With respect to C-Rule 27 of the Austrian Code of Corporate Governance, the remuneration policy contains a provision that the company can demand repayment of the variable remuneration component if it becomes evident that it was paid on the basis of figures that are clearly wrong.

Executive Board mandates are generally limited to five years, however first-time appointments are limited to three years. In order to maintain continuity in the composition of the Executive Board, care is taken to ensure that the contracts of several Executive Board members do not expire on the same date.

The employment contracts for Executive Board members have a limited term. They may only be terminated without notice at any time on important reasons, particularly those mentioned in Section 27 of the Austrian Salaried Employees Act (reasons for dismissal according to labor law), or in case of a serious breach of duty. In the event of permanent occupational disability or after more than six months of illness, the contract of employment can be terminated at the end of the respective month with three months' notice. In this case, entitlement to the fixed salary and 50% of the variable remuneration shall remain intact for the remainder of the contract term, however not longer than 18 months. This also applies in the event of premature termination of the Executive Board appointment without serious reasons.

All Executive Board members (and all executives) have the opportunity to subscribe to a share option program based on sustainable development of the company's share price and earnings. In all share option programs for managerial staff and the Executive Board since the Initial Public Offering (IPO), participation was contingent on investing at least 20,000 EUR in ANDRITZ shares for managerial staff and 40,000 EUR for members of the Executive Board no later than the allocation date of the options. This investment must be maintained continuously until exercise of the options by those persons subscribing to the option program and evidence thereof must be brought when the options are exercised. There is a waiting period of three years before options can be exercised if the contract of employment is still in force (exception: end of employment contract as scheduled according to contract provisions).

No options were exercised by Executive Board Members in the 2019 business year.

No advances or loans were granted to members of the ANDRITZ AG Executive Board.

The Austrian Financial Market Authority stopped publishing notifications of directors' dealings by the Executive Board and Supervisory Board members or their related parties on July 3, 2016. This information must be published by the issuers.

The members of the Executive Board are entitled to receive pension scheme benefits. In addition to a retirement pension, these include benefits in the event of occupational disability as well as pension payments for dependents following the death of the beneficiary. The retirement pension is normally paid as from a certain age provided that the employment contract has already been terminated by this date. The administration work has been outsourced to pension funds. Pension arrangements are either defined-contribution or defined-benefit plans. In the event that the employment contract is terminated prematurely, contributions made up to this point shall still be vested. The pension amount to which the beneficiary is entitled is not subject to an escalation clause before any benefits become payable; after this, annual adjustments can be made to take account of the development in wages and salaries and of ANDRITZ's economic status.

Some of the Executive Board members shall, upon termination of their function and concurrent termination of their contract of employment, be entitled to severance payments in the meaning of Section 23 of the Austrian Salaried Employees Act unless such termination is the result of justified dismissal. Severance payments in the event of premature termination without good cause of activities as member of the Executive Board are provided for in the Executive Board contracts according to Section 27 of the Austrian Salaried Employees Act.

ANDRITZ AG has taken out Directors' and Officers' liability insurance (D&O insurance) for 2019. The policy holder is ANDRITZ AG. The costs are covered by the company. The D&O insurance covers certain personal liability risks of persons in the ANDRITZ GROUP acting under responsibility. The annual cost is approximately 290,000 EUR.

In connection with the execution of a project in Austria, two administrative criminal proceedings for alleged breach of the regulations concerning temporary hiring and employment of foreign nationals were opened against members of the ANDRITZ AG Executive Board and extremely high fines were imposed initially. An appeal was filed against these decisions. There was also a preliminary ruling by the European Court of Justice in favor of the Executive Board members in the course of a procedure to clarify certain preliminary legal questions relating in particular to the disputed admissibility of accumulating administrative penalties. In autumn 2019, the administrative court of the concerned province then finally granted the appeal and set the penalties aside. The costs of the defense amounting to approximately 350,000 EUR will now be reclaimed from the Republic of Austria.

Supervisory Board remunerations

Subject to approval by the Annual General Meeting, the Supervisory Board remunerations (including attendance fees) for the 2019 business year amount to a total of 312,500 EUR (2018: 305,000 EUR) and are divided between the individual Supervisory Board members as follows:

(in EUR)	Remuneration (including attendance fees)
Christian Nowotny (Chairman of the Supervisory Board)	72,500
Fritz Oberlerchner (Deputy Chairman of the Supervisory Board)	57,500
Jürgen Hermann Fechter	40,000
Alexander Isola	42,500
Monika Kircher	57,500
Alexander Leeb (appointed to the Supervisory Board as of March 27, 2019)	30,000
Kurt Stiassny (retired from the Supervisory Board as of March 27, 2019)	12,500
	312,500

No Supervisory Board remuneration was paid to the Supervisory Board members delegated by the employee representative organizations.

The chairman of the Supervisory Board, Christian Nowotny, is also a member of the Schuler AG Supervisory Board and received a remuneration amounting to 25,000 EUR (excluding attendance fees) for the 2019 business year.

The remuneration scheme of the Supervisory Board is composed of a fixed and an attendance-related portion. The fixed portion is a global sum, which is to be distributed such that the chairman of the Supervisory Board receives double the amount and his deputy one-and-a-half-times the amount paid to the other members. This also applies to the chairwoman of the audit committee. The second portion consists of a lump sum fee paid in respect of each meeting that the member attends.

No advances or loans were granted to members of the ANDRITZ AG Supervisory Board. There were no agreements subject to approval between ANDRITZ AG and individual members of the Supervisory Board or companies closely associated with Supervisory Board members.

The remuneration report for the Executive Board and the Supervisory Board of ANDRITZ AG is available in the Notes to the Consolidated Financial Statements 2019.

Working procedures for the Executive Board and the Supervisory Board

Allocation of competencies in the Executive Board

The Executive Board of ANDRITZ AG holds board meetings at regular intervals on essential, group-relevant topics and individual business areas. The competencies and responsibilities of the individual Executive Board members are listed in the notes on the Executive Board members in this Corporate Governance report. The rules of procedure for the Executive Board contain a comprehensive catalog of those business transactions requiring the prior approval of the Supervisory Board in addition to those stated in the mandatory regulations in the Austrian Corporation Act.

The Executive Board and Supervisory Board, particularly their chairmen, maintain ongoing contact to discuss the company's development and strategy beyond the scope of the discussions at the Supervisory Board meetings.

Supervisory Board committees

The Supervisory Board of ANDRITZ AG has established an audit committee that held two meetings to deal with the annual and consolidated financial statements for 2019, prepare the review of the annual and consolidated financial statements for 2019 and of the proposal for distribution of profits, additionally to deal with issues concerning the auditor, and implementation of the internal control and risk management systems in the ANDRITZ GROUP. As a financial expert, Monika Kircher chairs the audit committee.

The Supervisory Board has also established a nominations and remunerations committee that held two meetings in 2019 and whose scope of activities includes the remuneration paid to the Executive Board members and the content of their employment contracts, as well as appointments to Executive and Supervisory Board positions that become vacant, and succession planning matters.

The ANDRITZ AG Supervisory Board held five regular meetings in the 2019 business year (four regular meetings, one constituent meeting). All members took part in all meetings but one. The focus of these meetings were monitoring of the current business development of the ANDRITZ GROUP, including possible deviations from the budget, the development of earnings on major orders, the strategic goals, medium-term planning for the individual business areas, as well as specific topics such as company acquisitions, granting of joint procurations, and other business subject to approval. The chairman and deputy-chairman receive a monthly report on the main developments. One business area is presented at each of the regular Supervisory Board meetings and this business area's strategy is discussed. A comprehensive report on group-wide compliance is provided at one of the Supervisory Board meetings; this meeting also deals with the results of internal audits, and any measures resulting from these audits are presented and discussed.

Pursuant to the requirement of the Austrian Code of Corporate Governance (C-rule 36), the Supervisory Board conducted a self-evaluation in the past business year and discussed the efficiency of its activities, especially its organizational structure and working methods.

Committee	Members
Audit committee	<ul style="list-style-type: none"> ▪ Monika Kircher (Chairwoman) ▪ Christian Nowotny (Deputy-Chairman) ▪ Fritz Oberlerchner ▪ Andreas Martinier
Nomination and remuneration committee	<ul style="list-style-type: none"> ▪ Christian Nowotny (Chairman) ▪ Fritz Oberlerchner (Deputy-Chairman) ▪ Monika Kircher

Auditors

KPMG Austria GmbH Wirtschaftsprüfungs- und Steuerberatungsgesellschaft, Vienna, was selected by the 112th Annual General Meeting of ANDRITZ AG held on March 27, 2019 as independent auditor for the 2019 financial statements and the consolidated financial statements.

Diversity concept

One of the Supervisory Board's most important tasks is to prepare and secure appointments to the Supervisory Board and Executive Board, as corporate bodies, that are appropriate to the company. The Executive Board and Supervisory Board of ANDRITZ AG should be formed by personalities who have the necessary knowledge, abilities, and the individual competences and experience that management and supervision of a globally operating company oriented towards the capital market and working in the mechanical and industrial plant engineering industry require and guarantee.

The Supervisory Board (nominations committee) defines the following goals for composition of the Supervisory Board and the Executive Board:

The **members of the Supervisory Board** should have the following special knowledge, skills and professional experience relating to the structure and business segment of the company as a whole:

- The Supervisory Board should have shareholder representatives as members with international experience or special expertise in one or several of the company's most important markets outside Austria.
- The Supervisory Board should contain personalities from the industry sector, science, technology or research who have gained experience in areas of major significance for ANDRITZ.
- Furthermore, as representative of the shareholders, the Supervisory Board should contain personalities who have gained experience in management and/or controlling of another publicly listed company.
- In seeking out qualified personalities for the Supervisory Board and who strengthen the board as a whole as best possible with professional and management skills, it is also important to ensure there is diversity. In preparing suggestions for possible candidates, consideration should be given to achieving an appropriate distribution of both men and women in the Supervisory Board in addition to mutually complementary professional profiles as well as professional and life experience.
- At least one member of the Supervisory Board should have special expertise in the field of accounting or auditing.

- None of the members of the Supervisory Board should hold an executive function or a consulting position for the company's main competitors or its suppliers.

The goal is to achieve an appropriate proportion of women in the Supervisory Board independently of any legal obligation in this respect.

The Supervisory Board ensures long-term succession planning for positions on the Executive Board. When screening candidates for position on the Executive Board, the basic suitability criteria from the perspective of the Supervisory Board should be the candidates' professional qualifications for the purview envisaged, convincing management skills, performance so far, as well as knowledge of the company. When weighing up which personality would best complement the Executive Board, diversity is also one of the criteria influencing the Supervisory Board's decision. Diversity means different, mutually complementary profiles, professional and life experience, also in the international field, as well as appropriate representation of men and women alike. The Supervisory Board takes the following aspects into consideration when taking its decision:

- The members of the Executive Board should have many years of management experience as well as experience from different professions if possible.
- The members should have experience in international management.
- At least one member of the Executive Board should have a technical education or many years of technical, professional experience.
- The Executive Board as a whole should have many years of experience in the fields of development, production, sales, finance, and human resources management.
- No target number has been defined for the proportion of women in the Executive Board. The Supervisory Board decides who holds the position of Executive Board member in the interests of the company and exclusively in acknowledgment of their professional and personal qualifications in each case. The Executive Board reports at regular intervals to the nominations committee on the percentage and development of female senior management, particularly those reporting to the top executives and at the first management level.
- The Supervisory Board will observe an age limit of seventy years for the members of the Executive Board; an adequate mix of age groups should be considered in the composition of the Executive Board.

The Executive Board has no female members; there are two female members on the Supervisory Board. There are women in management functions at the first and second reporting levels in numerous sectors. The proportion of women in the total workforce was 16.2% (2018: 16.5%) as of December 31, 2019.

The ANDRITZ GROUP supports and encourages the appointment of women, particularly in technical sectors. In many countries however, ANDRITZ is frequently confronted with the situation that there are still far fewer women than men in technical professions or graduating in technical subjects.

Thus, ANDRITZ supports various initiatives to encourage women to opt for a technical profession or take a degree in a technical subject. These initiatives include participating regularly in various events like recruiting and job orientation days for young women at universities. ANDRITZ also takes measures and makes investments to improve employees' work-life balance. The company-run kindergarten set up beside the headquarters of the ANDRITZ GROUP in Graz as well as at the Vienna location and the flexible working hours available to employees with young children are examples of these measures. When creating office space as part of new building projects, establishing child care facilities for the children of employees is always considered as well. In addition, a strict

equal opportunities policy is considered very important in the recruitment process. However, in its efforts to promote female employees, ANDRITZ will refrain from any measures that would discriminate against male employees.

Compliance at ANDRITZ

Compliance and ethically correct conduct form the basis of ANDRITZ's business activities and are defined in the Code of Conduct and Ethics. The cornerstones of all actions are integrity, respect, reliability and sustainability.

The Code is available to everyone in the ANDRITZ intranet and also on the ANDRITZ website. The Code of Conduct and Ethics was revised in February 2019, particularly concerning the human rights and environmental protection topics, and published as booklet in 13 languages. In addition, a video was produced in seven languages, summarizing the content of the code in a way that is easy to understand. Employees were also acquainted personally with the content of the new code in the course of an information campaign conducted at the larger company locations.

Organization

Operations by the Compliance group function are divided into a Compliance Committee, which is responsible for strategic planning of all activities, and an operational compliance function, which has substantive responsibility and legal experts with responsibility for specific regions and topics. The Group Compliance Officer coordinates between the committees and deals with the strategic planning of all activities.

In order to monitor the effectiveness of the compliance management system and further improve it, ANDRITZ undergoes regular certification: ISO 19600 certification for the compliance management system and ISO 37001 certification for anti-corruption management were provided for the first time in 2018 and are reviewed annually in a monitoring audit and every three years during re-certification. The regulations contain requirements for developing, implementing and maintaining a compliance management system as well as suitable measures to help protect against, track down and provide proof of corruption.

Based on the results of the survey conducted once a year among senior executives on the services provided by this group function, various priorities were set in the past year. For example, newly acquired companies should be involved more quickly in the group-wide compliance program, and HR competencies and contacts in the individual companies should be improved

Training

Compliance concerns every single ANDRITZ employee so all executives, staff and other groups that work for ANDRITZ share the values and principles laid down in the Code of Conduct and Ethics. Training has always been an important in conveying an understanding of all of the rules and regulations ever since compliance activities began in the company.

Compliance has also been using the ANDRITZ eLearning platform since 2019 in order to make better use of synergies and create a uniform appearance. In addition, single sign-on saves time here. The Schuler sub-group has also been integrated into the ANDRITZ eLearning platform.

Online training modules convey the most important content from the compliance policies. It is constantly updated and new training programs are launched on relevant topics. Each new employee must undergo basic training as well as corruption prevention training within the first few weeks after joining the company. This training is available online in nine languages. In addition, each employee inside the European Union receives special training on the topic of data protection, and each employee in the USA has training on "Harassment in the Workplace".

Additional training content, for example relating to anti-trust laws, insider trading, export controls, the supplier code of conduct, and handling of sensitive data is also provided regularly for the groups of employees exposed to these topics. Moreover, training on fighting corruption was introduced in 2019 because these topics have become much more important and relevant. In addition, employees with access to a PC can also watch the awareness-raising video on the updated Code of Conduct and Ethics. The training content is updated regularly. More than 21,600 training modules or refresher courses were assigned to employees in 2019.

Whistleblowing system

Employees and external business partners can report compliance-relevant incidents anonymously through an online-based whistleblower system or can, of course, continue to use conventional channels like the compliance mail address, sending a letter, or reporting in person. However, the most common form is the online whistleblower system. This was used in the past year to report HR-related topics, but also in connection with fraud and other cases. As a minimum, each case is treated according to the four-eyes principle. The Group Compliance Officer and the Compliance Manager access the reports first and decide who to consult on which case. More than 50 cases were reported in 2019.

In addition, a case was disclosed last year in which a former managing director made massive accusations in connection with the award of projects. This case had already been examined many years ago in an extensive compliance investigation commissioned by the Executive Board and also involving external attorneys. The results of such compliance investigations are always treated confidentially.

Measures to prevent data theft

In the past few years, ANDRITZ has tightened up the instructions and regulations for secure payment transactions. The reason for this was the increasing number of attacks on information systems that use tricks, for example phishing mails, to manipulate the systems' users and thus gain access to internal and sensitive data and information or trigger unwarranted payments.

The employees are provided regularly and pro-actively with information on this topic, for example with more information in the intranet and the employee magazine. E-mails from external sources are clearly marked as such and the online compliance training also explicitly points out that caution must be exercised with such mails.

Risks connected with social engineering include money being transferred to fake accounts as well as hacking of mail accounts in order to change the bank accounts on outgoing invoices, causing customers to make payments to an account that is not in ANDRITZ's name. There are considerations to establish a separate area of responsibility for prevention of money laundering and monitoring of financial transactions.

Anti-money laundering and financing of terrorism

Ever more stringent laws are being implemented worldwide to fight money laundering and financing of terrorism. As a result, money laundering and financing of terrorism have become a central topic in the financial sector. A new guideline was drawn up in 2018 in cooperation with the Finance department. The aim of this guideline is to ensure that each company within the Group introduces the necessary processes to prevent its being involved in money laundering and financing of terrorism. This policy applies to all outgoing and incoming payments.

Export controls

A software-based process was introduced two years ago – beginning with ANDRITZ AG in Graz – to guarantee compliance with all legal provisions for export controls (in particular the terror, goods and embargo lists as well as usage restrictions). This process is currently being rolled out to approximately 60 selected subsidiaries and is to be completed in 2022.

Internal auditing

The Internal Auditing group function conducts comprehensive audits on ANDRITZ subsidiaries and group functions, focusing on financial and operational topics. In suspicious cases, event-driven audits are also conducted without prior notice. The purpose of the audits is to ensure compliance with internal guidelines and the fundamental principles of profitability and to highlight potential areas for improvement in the operational workflows. Other tasks handled by this group function are identification of risks and dealing with them in an appropriate way.

The department reports directly to the President and CEO, and the audit schedule for the coming two years is established by the Executive Board. The audit reports are presented to the Executive Board and in summarized form to the members of the Supervisory Board as well. A total of 37 audits were conducted in the 2019 business year, comprising 22 company audits, ten partial audits, and five compliance audits (2018: 26 audits). The improvement measures proposed in these audits are aligned directly with the management of the company or group function under audit.

External evaluation of the corporate governance report

The Austrian Code of Corporate Governance requires regular external evaluation of the company's compliance with this code. ANDRITZ AG commissioned BDO Austria GmbH Wirtschaftsprüfungs- und Steuerberatungsgesellschaft, Vienna, to conduct this evaluation for the 2019 business year. This evaluation was based on the official questionnaire issued by the Austrian Working Group for Corporate Governance. Based on this evaluation, the auditors found that ANDRITZ AG had adhered to the C-rules of the Austrian Code of Corporate Governance. The full report on the external evaluation is available on the ANDRITZ web site andritz.com.

Changes after the reporting date

There were no major changes between the reporting date and the date of issue of the Corporate Governance Report.

Graz, February 2020

The Executive Board of ANDRITZ AG

Wolfgang Leitner m.p.
(President and CEO)

Humbert Köfler m.p.

Norbert Nettesheim m.p.
(CFO)

Joachim Schönbeck m.p.

Wolfgang Semper m.p.

REPORT OF THE SUPERVISORY BOARD

The Supervisory Board and the Executive Board held five meetings (four regular meetings, one constituent meeting) during the reporting period for in-depth discussions on the economic situation and strategic development of the company, as well as on major events, capital expenditures, and possible acquisitions. In the course of regular reporting and in all meetings, the Executive Board informed the Supervisory Board extensively in writing and verbally, by means of detailed reports, on the business and financial situation of the Group and its affiliates, as well as on topics regarding human resources, medium-term planning, capital expenditure, and acquisition projects. At one meeting, the Supervisory Board discussed safety at work and corresponding measures. At another meeting, compliance was one of the main points on the agenda. At individual meetings, the medium-term planning of the individual business areas was also discussed with the Executive Board. An important item on the agenda was to review whether the main acquisitions have come up to the expectations on which the decision to make the purchase was based, and if this was not the case, to establish the reasons why not and determine what conclusions can be drawn from this fact. Additional information was provided on special events. Furthermore, the Chairman of the Supervisory Board and the President & Chief Executive Officer were in regular contact to discuss the company's strategy and business development. There are plans for the Supervisory Board to conduct a self-assessment of its activities and discuss the result during its meeting in the second quarter of 2020. The self-assessment for 2018/19 was presented and analyzed during the meeting on May 29, 2019. In November 2019, an external review was commissioned on compliance with the C-rules of the Austrian Corporate Governance Code (ÖCKG).

The Executive Board mandate of Mark von Laer was not renewed. He left the Executive Board by mutual agreement on December 5, 2019. The members of the nomination committee conducted several interviews with possible candidates for the position of Chief Financial Officer. Finally, Norbert Nettesheim was proposed unanimously to the Supervisory Board for election. The decisive factor in this proposal was his experience and external confirmation of his reputation. He was appointed for three years and took over this function on December 6, 2019.

The resolution to adapt and update the Executive Board's rules of procedure was passed at the Supervisory Board meeting on December 5, 2019. In addition, the report on the remunerations policy was adopted. This new report required by the 2019 amendment to the Stock Corporation Act is to be presented for the first time to the Annual General Meeting for 2019 (in March 2020).

The Presidium of the Supervisory Board acted on behalf of the company in matters concerning the Executive Board. The nomination and remunerations committee discussed Executive Board matters with potential candidates for the Executive Board in two meetings and several discussions.

Kurt Stiassny stepped down from the Supervisory Board at his own request at the end of the Annual General Meeting for the 2018 business year on March 29, 2019. Sincerest thanks to him for his many years on the board and the profound advice he offered with great commitment at all times.

Following deliberations and consultations on potential successors, the nomination committee proposed Alexander Leeb for election to the Supervisory Board, particularly in view of his experience in the pulp and paper industry and his knowledge of the Asian market. The Annual General Meeting elected Alexander Leeb as member of the Supervisory Board for five years on March 29, 2019.

All members of the Supervisory Board took part in all meetings with the exception of one meeting.

In two meetings, the audit committee dealt in particular with the proposal for the appointment of the auditor of the financial statements and consolidated financial statements, the quality of the accounting-related internal control system, the risk management, the reporting by the Internal Auditing department, and the measures to safeguard the independence of the annual auditor when providing non-audit services permitted. In addition, individual topics such as risk analysis, IT security to prevent external attacks, and implementation of the EU's General Data Protection Regulation were discussed and reported on to the Supervisory Board. All members of the audit committee attended all of the committee meetings.

In dealing with the financial statements for 2018, the audit committee called in the auditor to the meeting on March 5, 2019 to audit the financial statements, the consolidated financial statements, the management report, and the Executive Board's proposal for distribution of profits. The auditor also attended the preparatory meeting in December 2018. Furthermore, a proposal was made for the choice of auditor of the financial statements and consolidated financial statements for the 2019 business year. This auditor's relationship with the ANDRITZ GROUP and its executive bodies was examined, the fee for the annual audit was negotiated, and a decision was taken to propose KPMG Austria GmbH to the Annual General Meeting as auditors of the 2019 financial statements and consolidated financial statements. Further items on the agenda were the auditor's report on the function of the company's risk management system, a report on the Internal Auditing department, the compliance report and the sustainability report.

At the audit committee meeting on December 5, 2019, the committee members – with the auditor also present – discussed the organization, scheduling and auditing of the 2019 financial statements and consolidated financial statements (particularly in view of the group of subsidiaries to be fully consolidated) as well as a report by the Executive Board on the form and efficiency of the internal control system and Internal Auditing department. The committee also passed a resolution giving limited permission for the provision of non-audit services up to completion of the audit for the 2019 financial year.

At the Supervisory Board meeting on March 29, 2019 after the Annual General Meeting and held on the same day, Christian Nowotny was elected as Chairman of the Supervisory Board and Fritz Oberlerchner as Deputy-Chairman. Monika Kircher (Chairwoman), Christian Nowotny (Deputy-Chairman), and Fritz Oberlerchner were elected as members of the audit committee, and Andreas Martiner was delegated to the committee by the employees' representatives. Christian Nowotny (Chairman), Fritz Oberlerchner (Deputy-Chairman) and Monika Kircher were elected as members of the nomination and remunerations committee.

The financial statements and management report of ANDRITZ AG and the consolidated financial statements for 2019 drawn up according to IFRS were audited (including the accounts) and certified by KPMG Austria GmbH Wirtschaftsprüfungs- und Steuerberatungsgesellschaft, Vienna, who had been appointed as auditors by the Annual General Meeting. The management report, which is now required by law, was also the subject of the discussions and completeness check. The Supervisory Board examined the documents in accordance with Section 96 of the Austrian Stock Corporation Act as well as the management report and the corporate governance report and approved the financial statements, which are hereby adopted in accordance with Section 96 (4) of the Austrian Stock Corporation Act. The Supervisory Board also reviewed and approved the Executive Board's proposal for distribution of profits. The final results of the audits conducted did not give rise to any objections.

Graz, February 2020

Christian Nowotny m.p.
Chairman of the Supervisory Board

Consolidated financial statements 2019 of the ANDRITZ GROUP

Consolidated income statement	69
Consolidated statement of comprehensive income	70
Consolidated statement of financial position	71
Consolidated statement of cash flows	72
Consolidated statement of changes in equity	74
Notes to the consolidated financial statements	75
Statement by the Executive Board, pursuant to section 124 (1) of the (Austrian) Stock Exchange Act	154
Glossary	155
Auditor's report	157

GRI index	162
-----------	-----

CSR data overview	167
-------------------	-----

CONSOLIDATED INCOME STATEMENT

FOR THE 2019 FINANCIAL YEAR

(in TEUR)	Note	2019	2018
Sales	9.	6,673,896	6,031,455
Changes in inventories of finished goods and work in progress		-34,675	-3,372
Capitalized cost of self-constructed assets		6,462	1,835
		6,645,683	6,029,918
Other operating income	10.	96,201	89,270
Cost of materials	11.	-3,305,190	-2,987,737
Personnel expenses	12.	-2,015,220	-1,786,998
Other operating expenses	13.	-883,912	-846,404
Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)		537,562	498,049
Depreciation, amortization, and impairment of intangible assets and of property, plant, and equipment	14.	-270,554	-160,550
Impairment of goodwill	19.	-29,122	-15,884
Earnings Before Interest and Taxes (EBIT)		237,886	321,615
Result from associated companies and joint ventures	6.	-125	21
Interest income		21,246	22,068
Interest expenses		-69,267	-46,549
Other financial result		-8,824	7,079
Financial result	15.	-56,970	-17,381
Earnings Before Taxes (EBT)		180,916	304,234
Income taxes	16.	-58,163	-84,541
NET INCOME		122,753	219,693
Thereof attributable to:			
Shareholders of the parent		127,804	221,991
Non-controlling interests	31.	-5,051	-2,298
Weighted average number of no-par value shares	17.	100,411,757	101,009,544
Basic earnings per no-par value share (in EUR)	17.	1.27	2.20
Effect of potential dilution of share options		0	0
Weighted average number of no-par value shares and share options	17.	100,411,757	101,009,544
Diluted earnings per no-par value share (in EUR)	17.	1.27	2.20
Proposed or paid dividend per no-par value share (in EUR)	31.	0.70	1.55

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FOR THE 2019 FINANCIAL YEAR

(in TEUR)	Note	2019	2018
NET INCOME		122,753	219,693
Items that may be reclassified to profit or loss:			
Currency translation adjustments of foreign operations		-3,722	-13,544
Reclassification to profit or loss		-9	-1,226
Related income taxes		61	470
Currency translation adjustments of foreign operations, net of tax		-3,670	-14,300
Result from cash flow hedges		-4,868	-1,458
Reclassification to profit or loss		0	0
Related income taxes		1,217	364
Result from cash flow hedges, net of tax	32.	-3,651	-1,094
Result from associated companies, accounted for using the equity method		0	-99
Reclassification to profit or loss		0	492
Result from associated companies, accounted for using the equity method, net of tax	6.	0	393
Items that will not be reclassified to profit or loss:			
Actuarial gains/losses		-29,278	-7,149
Related income taxes		8,233	972
Actuarial gains/losses, net of tax	22.	-21,045	-6,177
Result from fair value valuation of financial assets		-3,218	-22,156
Related income taxes		107	3,313
Result from fair value valuation of financial assets, net of tax	28.	-3,111	-18,843
OTHER COMPREHENSIVE INCOME		-31,477	-40,021
TOTAL COMPREHENSIVE INCOME		91,276	179,672
Thereof attributable to:			
Shareholders of the parent		96,794	182,206
Non-controlling interests		-5,518	-2,534

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS OF DECEMBER 31, 2019

(in TEUR)	Note	2019	2018
ASSETS			
Intangible assets	18.	309,197	372,921
Goodwill	19.	776,915	784,590
Property, plant, and equipment	20.	1,295,238	1,132,134
Shares in associated companies and joint ventures	6.	4,802	17
Investments and other financial assets	29.	109,241	139,960
Other receivables and assets	24.	30,685	32,753
Deferred tax assets	16.	179,457	167,157
Non-current assets		2,705,535	2,629,532
Inventories	25.	842,389	869,274
Advance payments made	26.	137,833	114,558
Trade accounts receivable	23.	931,804	974,117
Contract assets	9.	734,146	786,354
Receivables from current taxes		30,293	54,121
Other receivables and assets	24.	336,017	304,233
Investments	29.	304,045	325,974
Cash and cash equivalents	30.	1,200,794	858,758
Assets held for sale	35.	11,238	1,702
Current assets		4,528,559	4,289,091
TOTAL ASSETS		7,234,094	6,918,623
SHAREHOLDERS' EQUITY AND LIABILITIES			
Share capital		104,000	104,000
Capital reserves		36,476	36,476
Retained earnings		1,066,111	1,174,816
Equity attributable to shareholders of the parent		1,206,587	1,315,292
Non-controlling interests		12,972	15,504
Total shareholders' equity	31.	1,219,559	1,330,796
Bank loans and other financial liabilities	34.	1,227,044	922,548
Lease liabilities	21.	213,714	25,170
Provisions	22.	593,267	579,710
Other liabilities	27.	43,164	59,114
Deferred tax liabilities	16.	159,662	184,368
Non-current liabilities		2,236,851	1,770,910
Bonds	34.	0	343,684
Bank loans and other financial liabilities	34.	132,437	116,380
Lease liabilities	21.	46,394	4,792
Trade accounts payable		668,934	604,189
Contract liabilities from sales recognized over time	9.	1,230,276	1,003,518
Contract liabilities from sales recognized at a point in time	9.	231,962	277,116
Provisions	22.	489,847	437,977
Liabilities for current taxes		37,830	53,996
Other liabilities	27.	935,028	975,265
Liabilities relating to assets held for sale	35.	4,976	0
Current liabilities		3,777,684	3,816,917
TOTAL SHAREHOLDERS' EQUITY AND LIABILITIES		7,234,094	6,918,623

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE 2019 FINANCIAL YEAR

(in TEUR)	Note	2019	2018
Earnings Before Taxes (EBT)		180,916	304,234
Interest result	15.	48,021	24,481
Depreciation, amortization, and impairment of intangible assets, goodwill as well as property, plant, and equipment		299,676	176,434
Result from associated companies and joint ventures	15.	125	-21
Changes in provisions		28,220	-105,941
Gains/losses from disposal of fixed and financial assets		-6,241	-7,268
Other non-cash income/expenses		36,514	12,909
Gross cash flow		587,231	404,828
Changes in inventories		18,230	-23,070
Changes in advance payments made		-22,583	-13,555
Changes in receivables		26,699	41,536
Changes in contract assets		71,452	-159,818
Changes in contract liabilities from sales recognized over time		212,661	-66,632
Changes in contract liabilities from sales recognized at a point in time		-60,657	-17,961
Changes in liabilities		84,887	-39,241
Change in net working capital		330,689	-278,741
Interest received		20,599	21,005
Interest paid		-41,606	-36,539
Dividends received		3,092	711
Income taxes paid		-78,428	-103,510
CASH FLOW FROM OPERATING ACTIVITIES	34.	821,577	7,754
Payments made for property, plant, and equipment and for intangible assets		-122,036	-127,128
Payments received for disposals of property, plant, and equipment and intangible assets		8,708	5,694
Payments made for non-current and current financial assets		-259,182	-214,500
Payments received for disposal of non-current and current financial assets		276,607	497,042
Payments made for associated companies and joint ventures		-4,898	-6,308
Net cash flow from company acquisitions	34.	-7,091	-269,983
Net cash flow from sale of subsidiaries	34.	0	25,347
CASH FLOW FROM INVESTING ACTIVITIES	34.	-107,892	-89,836
Payments made for the redemption of bonds	34.	-350,000	-427,586
Payments received from the issuance of Schuldscheindarlehen	34.	175,000	500,000
Payments received from bank loans and other financial liabilities	34.	172,581	57,794
Payments made for bank loans, other financial liabilities, and lease liabilities	34.	-86,458	-78,072
Dividends paid by ANDRITZ AG	31.	-156,492	-156,642
Dividends paid to non-controlling interest holders and former shareholders		-601	-2,388
Purchase of non-controlling interests and payments to former shareholders	34.	-79,761	-411
Purchase of treasury shares	31.	-39,776	-4,922
CASH FLOW FROM FINANCING ACTIVITIES	34.	-365,507	-112,227

(in TEUR)	Note	2019	2018
CHANGES IN CASH AND CASH EQUIVALENTS		348,178	-194,309
Currency translation adjustments		-4,975	-18,306
Changes in consolidation scope		-1,146	111
Valuation allowance		-21	-216
Cash and cash equivalents at the beginning of the period	30.	858,758	1,071,478
Cash and cash equivalents at the end of the period	30.	1,200,794	858,758

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

FOR THE 2019 FINANCIAL YEAR

		Attributable to shareholders of the parent							Non-controlling interests	Total share-holders' equity	
(in TEUR)	Note	Share capital	Capital reserves	Other retained earnings	Fair value reserve	Actuarial gains/ losses	Currency translation adjustments	Treasury shares	Total		
BALANCE AS OF JANUARY 1, 2018		104,000	36,476	1,378,428	28,423	-75,980	-51,777	-127,284	1,292,286	24,433	1,316,719
Net income				221,991					221,991	-2,298	219,693
Other comprehensive income					-19,936	-6,160	-13,689		-39,785	-236	-40,021
Total comprehensive income				221,991	-19,936	-6,160	-13,689		182,206	-2,534	179,672
Dividends	31.			-156,642					-156,642	-2,388	-159,030
Changes from acquisitions									0	32	32
Changes in treasury shares	31.			95				-3,650	-3,555		-3,555
Changes concerning share option programs	31.			2,965					2,965		2,965
Transactions with non-controlling interests				-2,003					-2,003	2,003	0
Changes in consolidation type				35					35	-6,042	-6,007
Other changes				816	44		-860		0		0
BALANCE AS OF DECEMBER 31, 2018		104,000	36,476	1,445,685	8,531	-82,140	-66,326	-130,934	1,315,292	15,504	1,330,796
Change in accounting policies	2. a)			-3,347					-3,347		-3,347
BALANCE AS OF JANUARY 1, 2019		104,000	36,476	1,442,338	8,531	-82,140	-66,326	-130,934	1,311,945	15,504	1,327,449
Net income				127,804					127,804	-5,051	122,753
Other comprehensive income					-6,761	-20,435	-3,814		-31,010	-467	-31,477
Total comprehensive income				127,804	-6,761	-20,435	-3,814		96,794	-5,518	91,276
Dividends	31.			-156,492					-156,492	-601	-157,093
Changes in treasury shares	31.			-184				-38,049	-38,233		-38,233
Changes concerning share option programs	31.			-3,922					-3,922		-3,922
Transactions with non-controlling interests									0	307	307
Changes due to deconsolidation	31.			-1,350		-87	-81		-1,518	1,430	-88
Other changes				5,257	-7,026	-218			-1,987	1,850	-137
BALANCE AS OF DECEMBER 31, 2019		104,000	36,476	1,413,451	-5,256	-102,880	-70,221	-168,983	1,206,587	12,972	1,219,559

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

AS OF DECEMBER 31, 2019

A — General information and legal bases

- S.76 1. General information
- S.76 2. Accounting principles
- S.79 3. Accounting policies and use of discretionary judgments and estimates

B — Information on the structure of ANDRITZ

- S.81 4. Consolidation scope
- S.82 5. Acquisitions
- S.84 6. Associated companies and joint ventures
- S.85 7. Related parties

C — Result of the year

- S.89 8. Segment reporting
- S.91 9. Sales
- S.94 10. Other operating income
- S.94 11. Cost of materials
- S.94 12. Personnel expenses
- S.94 13. Other operating expenses
- S.95 14. Depreciation, amortization, and impairment of intangible assets and property, plant, and equipment
- S.95 15. Financial result
- S.96 16. Income taxes
- S.99 17. Earnings per share

D — Non-current assets and liabilities

- S.99 18. Intangible assets
- S.101 19. Goodwill
- S.104 20. Property, plant, and equipment
- S.106 21. Right of use assets from lease contracts and lease liabilities
- S.109 22. Provisions

E — Net working capital

- S.116 23. Trade accounts receivable
- S.116 24. Other receivables and assets
- S.116 25. Inventories
- S.117 26. Advance payments made
- S.117 27. Other liabilities

F — Financial and capital structure, financial instruments and risk management

- S.117 28. Financial assets and liabilities
- S.123 29. Investments and other financial assets
- S.124 30. Cash and cash equivalents
- S.124 31. Equity
- S.129 32. Derivatives
- S.132 33. Risk management – risks relating to financial instruments

G — Other information

- S.142 34. Consolidated statement of cash flows
- S.144 35. Assets held for sale
- S.145 36. Contingent assets and liabilities
- S.146 37. Expenses for services by the group auditor
- S.146 38. Events after the balance sheet date
- S.147 39. Group companies

A) GENERAL INFORMATION AND LEGAL BASES

1. General information

ANDRITZ AG is incorporated under the laws of the Republic of Austria and has been listed on the Vienna Stock Exchange since June 2001. The registered office address of ANDRITZ AG, the parent company of the ANDRITZ GROUP, is at Stattegger Strasse 18, 8045 Graz, Austria. The ANDRITZ GROUP (the "Group" or "ANDRITZ") is a leading producer of high-technology industrial machinery and operates through four strategic business areas: Pulp & Paper, Metals, Hydro, and Separation.

The consolidated financial statements are prepared under the responsibility of the Executive Board and are acknowledged by the Supervisory Board and the Annual General Meeting. On February 21, 2020, the Executive Board authorized the consolidated financial statements for the year ending on December 31, 2019.

Various amounts and percentages set out in these consolidated financial statements have been rounded. As a result, totals may differ from the amounts shown. If not stated otherwise, amounts are given in thousands of euros (TEUR).

2. Accounting principles

The financial statements were prepared in accordance with all International Financial Reporting Standards (IFRS) published by the International Accounting Standards Board (IASB) and endorsed by the European Union, whose application is mandatory for 2019. All interpretations published by the International Financial Reporting Interpretations Committee (IFRIC), which also have to be observed for 2019, were applied. The consolidated financial statements meet the requirements of section 245a UGB (Austrian Commercial Code) on exempting consolidated financial statements according to internationally accepted accounting standards. Going concern is the basis for accounting and valuation of the assets and liabilities.

a) Standards and interpretations that are applicable for the first time

In 2019, the following new, revised, and supplemented standards by the IASB as well as interpretations of the IFRIC are to be considered mandatory:

Standard/Interpretation	Title	Effective for annual financial statements for periods beginning on or after	Endorsement by EU
IAS 19	Amendment: Plan amendment, curtailment or settlement	January 1, 2019	March 13, 2019
IAS 28	Amendment: Long-term interests in associates and joint ventures	January 1, 2019	February 8, 2019
IAS 12, IAS 23, IFRS 3, and IFRS 11	Annual improvements of IFRS (Cycle 2015-2017)	January 1, 2019	March 14, 2019
IFRS 9	Amendment: Prepayment features with negative compensation	January 1, 2019	March 22, 2018
IFRS 16	Leases	January 1, 2019	October 31, 2017
IFRIC 23	Uncertainty over income tax treatments	January 1, 2019	October 23, 2018

IFRS 16 – Leases

The central idea of IFRS 16 is to record all leases and related contractual rights and obligations on the balance sheet of the lessee. For all leases, the lessee recognizes a lease liability for the obligation to make lease payments in the future. At the same time, the lessee capitalizes a right to use the underlying asset which basically corresponds to the present value of the future lease payments plus directly attributable costs. The differentiation between finance and operating leases previously required under IAS 17 – Leases is no longer applicable to the lessee. For the lessor, however, the requirements of the new standard are similar to the previous requirements of IAS 17.

IFRS 16 provides various transitional methods. ANDRITZ has decided against early application and opted for the modified retrospective method. As a result, IFRS 16 was applied on January 1, 2019 for the first time. The

previous year's figures have not been adjusted. The cumulative effects at the time of first-time adoption, January 1, 2019, are as follows:

(in TEUR)	December 31, 2018	IFRS 16	January 1, 2019
ASSETS			
Non-current assets			
Property, plant, and equipment	1,132,134	228,701	1,360,835
Current assets			
Other receivables and assets	304,233	-4,571	299,662
SHAREHOLDERS' EQUITY AND LIABILITIES			
Shareholders' equity			
Retained earnings	1,174,816	292	1,175,108
Non-current liabilities			
Lease liabilities	25,170	197,453	222,623
Other liabilities	59,114	-18,345	40,769
Current liabilities			
Lease liabilities	4,792	47,060	51,852
Other liabilities	975,265	-2,330	972,935

For the identified leases, lease liabilities were recognized for future lease payments, discounted at the respective borrower's interest rate. The weighted average borrowing interest rate of lessees as of January 1, 2019 is 2.2%. The borrowing rates were determined on the basis of a reference interest rate plus a risk premium. The right of use assets were recognized in the amount of the lease liability (with the exception of advance payments). Therefore, the reported property, plant, and equipment increased by 228,701 TEUR. Land and buildings, vehicles, and other items of property, plant, and equipment were identified as categories. Most of the contracts, measured by number, originate from vehicle leases. The majority of the contracts, measured by the value of the right of use asset, originate from real estate lease agreements (203,137 TEUR). ANDRITZ has identified a building lease in the context of a business combination as an onerous contract. At the first-time application of IFRS 16, the practical expedient was selected and the right of use asset was adjusted by that amount (20,675 TEUR) which was shown in the balance sheet as of December 31, 2018 as a provision for onerous contracts. Capitalized advance payments decreased by 4,571 TEUR. The cumulative effect from the first-time application in the amount of 292 TEUR was recognized in the revenue reserves at initial recognition.

When first applying IFRS 16, ANDRITZ made use of the following practical expedients:

- A uniform discount rate was applied to portfolios of similarly structured leases.
- Instead of an impairment test the right of use asset was reduced by the amount for onerous contracts set immediately before the date of first application.
- Leases that expired within 12 months of the date of initial application were not recognized.
- When assessing the right of use asset at the time of initial application, the initial direct costs were disregarded.
- Assets of low value were not recognized.

The new lease definition was applied to old and new contracts. Upon initial recognition, the contracts were reassessed. The preservation of the original estimates for old contracts ("grandfathering" method) was not applied.

The reconciliation of the lease obligations as of December 31, 2018 to the recognized lease liabilities as of January 1, 2019 is as follows:

(in TEUR)	January 1, 2019
Operating lease agreements as of December 31, 2018 as disclosed in the notes to the consolidated financial statements	198,895
Leases of low-value assets (low-value leases)	-690
Leases with less than 12 months of lease term at transition	-8,408
Variable lease payments	-1,269
Non-lease components	-6,133
Residual value guarantees	0
Reasonably certain extension or termination options	84,605
Lease liabilities (gross, without discounting)	267,000
Discounting effect (incremental borrowing rate as of January 1, 2019)	-22,487
Lease liabilities (discounted)	244,513
Finance lease liabilities	29,962
LEASE LIABILITIES AS OF JANUARY 1, 2019	274,475

In the period after initial recognition, new leases were concluded. Leased assets, which were already accounted for as finance leases under property, plant, and equipment according to the old regulation, are also shown as right of use assets.

— [Read more in Note 21.](#) Right of use assets from lease contracts and lease liabilities.

IFRIC 23 – Uncertainty over income tax treatments

ANDRITZ adopted the IFRIC 23 interpretation as of January 1, 2019 and transitioned to this new standard in line with the modified retrospective approach. IFRIC 23 has clarified the accounting of income tax uncertainties.

After having analyzed uncertain tax treatments according to IFRIC 23, ANDRITZ considered an additional amount of 3,639 TEUR as income tax liabilities. Additionally, this measure had a decreasing impact on the opening balance of equity in the same amount.

The new interpretation is to be applied to taxable profits (tax losses), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatment under IAS 12. Based on IFRIC 23, an entity must consider whether it is probable that the relevant tax authority would accept each tax treatment used in its income tax filings, assuming full visibility of all relevant information. Each uncertain tax treatment is to be considered separately or together as a group, and the impact of uncertainty is to be measured using either the most likely amount or the expected value method, depending on which approach better predicts resolution of the uncertainty.

IFRS 9 – Change: Prepayment features with negative compensation

According to the current regulations of IFRS 9, the cash flow condition is not fulfilled or an obligation to valuation through profit and loss is mandatory, if the lender has to make a compensation payment in the event of a termination by the borrower (sometimes referred to as a prepayment gain). As a result of the amendment, the existing regulations of IFRS 9 will be adjusted, so that negative compensation payments can also be measured at amortized cost (or at fair value depending on the business model). According to the new regulation, the sign of the compensation payment is irrelevant. Depending on the interest level prevailing at termination, a payment in favor of the contracting party which causes the early repayment is also possible. The calculation of this equalization payment must be the same, both in the event of a prepayment penalty and in the event of a prepayment gain. It is expected that these changes will not have a material effect on ANDRITZ.

Other

The amendment to **IAS 19** requires a compulsory reassessment of current service cost and net interest using the current actuarial assumptions for changes, curtailments or settlements of defined benefit plans.

The amendment to **IAS 28** clarifies the application of IFRS 9 to long-term investments in associates or joint ventures that form part of the net investment in these associates or joint ventures, but are not accounted for using the equity method.

The **annual improvements to IFRS (Cycle 2015-2017)** provide clarifications on IAS 23 – Borrowing costs, IFRS 3 – Business combinations, and IFRS 11 – Joint arrangements.

These changed standards do not have any or no material effect on ANDRITZ.

b) Standards and interpretations, which have been published but are not yet applied

The International Accounting Standards Board (IASB) is working on numerous projects that will only have an effect on the financial years 2020 and onwards. ANDRITZ has not adopted the following accounting pronouncements that have been issued by the IASB, but are not yet effective:

Standard/Interpretation	Title	Effective for annual financial statements for periods beginning on or after	Endorsement by EU
IAS 1 and IAS 8	Amendment: Definition of material	January 1, 2020	November 29, 2019
	Amendments to references to the conceptual framework in IFRS Standards	January 1, 2020	November 29, 2019
IFRS 9, IAS 39 and IFRS 7	Amendment: Interest rate benchmark reform	January 1, 2020	January 15, 2020
IFRS 3	Amendment: Definition of a business	January 1, 2020	open
IFRS 17	Insurance contracts	January 1, 2021	open
IAS 1	Amendment: Presentation of the financial statements	January 1, 2022	open

The amendments to **IAS 1** and **IAS 8** create a uniform definition of the materiality of financial information.

In **changing the references to the conceptual framework**, the European Financial Reporting Advisory Group (EFRAG) has made editorial adjustments to the previous references to the framework in various standards. This affects IFRS 2, IFRS 3, IFRS 6, IFRS 14, IAS 1, IAS 8, IAS 34, IAS 37, IAS 38, IFRIC 12, IFRIC 19, IFRIC 20, IFRIC 22, and SIC 32.

The amendments to **IFRS 9**, **IAS 39**, and **IFRS 7** contain certain simplifications with regard to hedge accounting requirements and are mandatory for all hedge relationships affected by the interest rate benchmark reform.

With the amendment to **IFRS 3**, the IASB clarifies that a business comprises a group of activities and assets that contain at least one resource input and a substantial process, which together significantly contribute to the ability to produce output.

IFRS 17 regulates the recognition, valuation, presentation, and information for insurance contracts.

The change in the presentation with regard to **IAS 1** relates to an adjustment of the assessment criteria for the classification of liabilities as current or non-current.

These new or changed standards do not have any or no material effect on ANDRITZ.

3. Accounting policies and use of discretionary judgments and estimates

The notes to the consolidated financial statements have been adjusted in 2019: ANDRITZ describes the accounting policies as well as the use of discretionary judgments and estimates in the respective chapters.

a) Accounting policies

The accounting policies are indicated as follows:



ACCOUNTING POLICIES

With the exception of the amendments resulting from the first-time application of new standards (see chapter 2. a) Standards and interpretations that are applicable for the first time) ANDRITZ has consistently applied all accounting policies in preparing the consolidated financial statements in all periods presented. The following section describes the general accounting policies:

Consolidation principles

The basis for the consolidated financial statements is formed by group-wide standards and the individual financial statements of all fully consolidated companies in accordance with IFRS regulations. Intercompany receivables, liabilities, and internal service charges, including interim results within the Group, were eliminated. The consolidated financial statements were prepared on the basis of uniform accounting principles for comparable business transactions.

Currency translation

The consolidated financial statements are compiled in euros.

Foreign currency transactions

Foreign currency transactions are recorded in the functional currency by applying the exchange rate between the functional currency and the foreign currency at the date of the transaction. Exchange rate differences arising on the settlement of monetary items at rates different from those at which they were initially recorded during the periods are recognized in the income statement in the period in which they arise.

Foreign subsidiaries

Foreign consolidated subsidiaries are regarded as foreign operations because they are financially, economically, and organizationally autonomous. Their functional currencies are generally their respective local currencies. Items of the statement of financial position of foreign subsidiaries are translated at year-end rates to the presentation currency (EUR). Expenses and income are translated using the average exchange rates for the year. All resulting translation differences are included in currency translation adjustments in equity.

The major exchange rates used for foreign currency translation are as follows:

In number of units per 1 EUR		Rate at reporting date		Average rate for year
Currency		December 31, 2019	December 31, 2018	2019
BRL	Brazilian real	4.52	4.44	4.41
CAD	Canadian dollar	1.46	1.56	1.49
CHF	Swiss franc	1.09	1.13	1.11
CNY	Chinese renminbi yuan	7.82	7.88	7.74
DKK	Danish kroner	7.47	7.47	7.47
GBP	British pound	0.85	0.89	0.88
INR	Indian rupee	80.19	79.73	78.84
SEK	Swedish kronor	10.45	10.25	10.59
USD	US dollar	1.12	1.15	1.12

Effects of hyperinflation

Argentina has to be regarded a hyper-inflationary economy, as the cumulative three-year increase in the Consumer Price Index exceeded 100%. Consequently, ANDRITZ applied the financial reporting in hyperinflationary economies to its subsidiary in Argentina. The impact on the change in accounting is not material.

b) Use of discretionary judgments and estimates

Preparation of the consolidated financial statements requires the management to make discretionary judgments, estimates, and assumptions that can affect the applied accounting policies and the reported amounts of assets, liabilities, income, and expenses. Actual results may differ from these estimates. These as well as underlying assumptions are reviewed regularly. Revisions of estimates are recognized prospectively. The Group has made key assumptions concerning the future and has identified material sources of estimation uncertainties and discretionary judgments.

In the following chapters, the use of discretionary judgments and estimates is indicated as follows:



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

B) INFORMATION ON THE STRUCTURE OF ANDRITZ

4. Consolidation scope



ACCOUNTING POLICIES

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power of disposition over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control is obtained until the date on which control is lost. Changes in the Group's share in a subsidiary that do not result in a loss of control are accounted for as equity transactions. When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, any related non-controlling interests, and other components of equity. Any resulting gain or loss is recognized through profit or loss.

In case the influence on the Group's assets, liabilities, financial position, and profit or loss of companies controlled directly or indirectly by ANDRITZ AG is of minor importance, the decision on inclusion is made on the basis of quantitative and qualitative considerations. The shares in non-consolidated companies are recorded in item "Investments and other financial assets".

The consolidated financial statements include ANDRITZ AG and those companies it controls directly or indirectly. 44 companies (2018: 43) controlled by ANDRITZ were not consolidated; 9 associated companies (2018: 7) were not accounted for at-equity.

The consolidation scope has changed as follows:

	2019		2018	
	Full consolidation	Equity method	Full consolidation	Equity method
Balance as of January 1	190	3	139	4
Acquisitions of companies			57	1
Disposals of companies			-1	-2
New foundations	1	1	1	
Additions due to a change in consolidation type			3	
Disposals due to a change in consolidation type	-5			
Mergers and liquidations	-3		-9	
Balance as of December 31	183	4	190	3
Thereof attributable to:				
Domestic companies	7	0	6	0
Foreign companies	176	4	184	3

Acquisition of companies

—Read more in Note 5. Acquisitions

Disposals due to a change in consolidation type

In the financial year 2019, ANDRITZ did not consolidate the following companies because of materiality reasons or because of a loss of control:

- ANDRITZ Biax SAS, France
- ANDRITZ Ritz Pte. Ltd., Singapore
- POWERLASE TECHNOLOGIES HOLDINGS LIMITED, UK
 - POWERLASE TECHNOLOGIES LIMITED, UK
 - Powerlase Technologies Inc, USA

The disposal of these subsidiaries resulted in a gain of 4,826 TEUR and was included in earnings before interest, taxes, and depreciation. The valuation allowance of a loan due from one of these companies is included in the financial result and amounts to 6,530 TEUR.

—Read more in Note 39. Group companies.

5. Acquisitions



ACCOUNTING POLICIES

Business combinations are accounted for by applying the acquisition method, whereby the purchase price is offset against the revalued net assets of the acquired company (capital consolidation). In doing so, the values at the acquisition date, which is the date on which control of the acquiree was obtained, are used as a basis. The acquired identifiable assets, liabilities, and contingent liabilities are generally recognized at their fair values irrespective of the extent attributable to non-controlling interests. Application of the acquisition method requires certain estimates and assumptions to be made, especially concerning the fair values of the intangible assets and property, plant, and equipment acquired, the liabilities assumed at the acquisition date, and the useful lives of the intangible assets and the property, plant, and equipment acquired. Non-controlling interests can be measured either at cost (partial goodwill method) or at fair value (full goodwill method). The choice of method can be made on a case-by-case basis. It is general practice within the ANDRITZ GROUP to use the partial goodwill method. In step acquisitions, where a company is acquired in several stages, the fair values of the acquired entity's assets and liabilities are measured in accordance with IFRS 3 – Business Combinations at the date on which control is obtained. Any resulting adjustments to the fair value of the existing interest are recognized in profit or loss. The carrying amount of the assets and liabilities already recognized in the statement of financial position is then adjusted accordingly.

a) Kempulp

In June 2019, ANDRITZ entered into an agreement to acquire individual assets and liabilities – without the legal entity (asset deal) – of Kempulp AB, Sweden. Kempulp is a provider of chemical pulping, washing, oxygen delignification, and bleaching technologies. The acquisition complements the Pulp & Paper business area's product portfolio. The closing of the transaction took place in July 2019.

b) Preliminary fair values at the acquisition date

The preliminary fair values of the assets acquired and liabilities assumed are as follows:

(in TEUR)	2019
Intangible assets	4,746
Property, plant, and equipment	173
Inventories	13,883
Trade accounts receivable	3,249
Contract assets	13,840
Cash and cash equivalents	599
Other receivables and assets	353
Provisions	-594
Trade accounts payable	-1,310
Contract liabilities from sales recognized over time	-12,278
Contract liabilities from sales recognized at a point in time	-13,929
Other liabilities	-1,042
Net assets	7,690
Goodwill	0
CONSIDERATION TRANSFERRED	7,690

Transaction costs directly related to the business combination are recognized as an expense incurred. The acquired receivables do not contain any receivables expected to be uncollectible.

Since the first-time consolidation the acquisition has contributed sales of 4,665 TEUR and EBITA of -515 TEUR to the ANDRITZ GROUP. If the business had been acquired at the beginning of the financial year 2019, it would have contributed sales of 9,842 TEUR and EBITA of -1,087 TEUR to the ANDRITZ GROUP.

c) Adjusted fair values

In the financial year 2019, new information was obtained about facts and circumstances that led to a revision of the accounting of acquisitions from previous financial year within the one-year period from date of acquisition. The adjustments are as follows:

(in TEUR)	Amounts reported as of December 31, 2018	Xerium	Others	Adjusted fair values
Intangible assets	263,367	0	0	263,367
Property, plant, and equipment	339,151	-7,444	-2	331,705
Deferred tax assets	4,367	0	0	4,367
Inventories	89,409	-915	-37	88,457
Trade accounts receivable	94,411	-1,057	0	93,354
Contract assets	12,664	0	32	12,696
Receivables from current taxes	8,207	0	0	8,207
Cash and cash equivalents	32,574	0	0	32,574
Other receivables and assets	28,338	-3,180	-201	24,957
Bonds	-436,213	0	0	-436,213
Bank loans and other financial liabilities	-69,677	0	0	-69,677
Provisions	-64,557	841	0	-63,716
Deferred tax liabilities	-77,973	2,116	-1,539	-77,396
Trade accounts payable	-42,918	-359	-225	-43,502
Contract liabilities from sales recognized over time	-5,104	0	0	-5,104
Contract liabilities from sales recognized at a point in time	-7,423	0	13	-7,410
Liabilities for current taxes	-23,053	0	1,978	-21,075
Other liabilities	-66,107	-1,162	615	-66,654
Net assets	79,464	-11,160	634	68,938
Non-controlling interests	-32	0	0	-32
Goodwill	251,470	11,160	-634	261,996
CONSIDERATION TRANSFERRED	330,903	0	0	330,903

! SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The first-time inclusion of all acquired assets and undertaken liabilities is based on preliminary values due to time constraints and not yet final valuations. If, within a year of the acquisition date, new and essential information becomes available about facts and circumstances that existed at the acquisition date and that would have led to corrections of the above amounts or to additional provisions, the accounting of the acquisitions will be adjusted.

Depending on the type of asset and the availability of information, intangible assets are determined using a suitable valuation method. The fair values of land and buildings are generally determined by external experts or experts in the group. In addition to the assumptions about the future development of the estimated cash flows, these valuations are also significantly influenced by the discount rates used. Analogous to the assets acquired and liabilities undertaken, all available information about the circumstances at the time of acquisition is also used for the initial accounting of contingent purchase price liabilities.

6. Associated companies and joint ventures

ACCOUNTING POLICIES

Associated companies are those entities which the Group has significant influence on, but not control or joint control over the financial and operating policies.

Joint ventures are entities over which ANDRITZ and one or more parties exercise joint control and have rights to the net assets of the agreement.

Associated companies and joint ventures are accounted for at equity and are initially recorded at cost.

Company	Main office	Business area	Category	2019	2018
Enmas ANDRITZ Pvt. Ltd.	Chennai, India	PP	Associated company	40.00%	40.00%
Viafin Brazil Oy	Teuva, Finland	PP	Associated company	40.00%	40.00%
Psiori GmbH	Freiburg im Breisgau, Germany	HY	Associated company	25.10%	25.10%
Smart Press Shop GmbH & Co KG	Stuttgart, Germany	ME	Joint venture	50.00%	0.00%

The summarized financial information for associated companies and joint ventures is shown in an aggregated form because the individual companies can be considered of minor importance. The following overview shows the items of the statement of financial position and the income statement for companies accounted for using the equity method:

(in TEUR)	2019		2018	
	Associated companies	Joint ventures	Associated companies	Joint ventures
DISCLOSURES ON FINANCIAL POSITION				
Assets	5,714	43,077	15,288	0
Liabilities	4,222	42,104	355	0
DISCLOSURES ON THE INCOME STATEMENT				
Sales	3,441	0	1,056	0
Result for the year	-407	-27	51	0

ANDRITZ has the following share in the income of companies accounted for using the equity method:

(in TEUR)	2019		2018	
	Associated companies	Joint ventures	Associated companies	Joint ventures
Share of net income	-104	-13	21	0
Share of other comprehensive income	0	0	-100	0
Share of total comprehensive income	-104	-13	-79	0
Aggregate carrying amount of the shares in associated companies and joint ventures	4,315	487	17	0

The result from associated companies and joint ventures amounted to -125 TEUR (2018: 21 TEUR) in the consolidated income statement. Non-recognized losses of associated companies amount to 0 TEUR (2018: 0 TEUR). The cumulative unrecognized losses amount to -989 TEUR (2018: -997 TEUR). They belong entirely to Enmas ANDRITZ Pvt. Ltd. A loan from a company accounted for using the equity method is guaranteed in the amount of 20,597 TEUR (2018: 0 TEUR).

7. Related parties

Under IAS 24 – Related Party Disclosures, related party transactions should be disclosed with persons and with companies, as far as they are not already included as consolidated companies in the consolidated financial statements of ANDRITZ AG. The members of the Executive Board and the Supervisory Board have been defined as key management personnel, making them and the close members of their families related parties. The compensation to be disclosed includes the remuneration of the Executive Board and the Supervisory Board.

a) Related entities

In addition to the companies included in the consolidated financial statements, the Group has direct or indirect relations in the ordinary course of business with non-consolidated subsidiaries and associated companies that are considered related parties of the Group. As the Group's transfer pricing policy provides transfer prices at arm's length, no transactions are conducted that do not comply with market standards. The non-inclusion of non-consolidated entities in the consolidated financial statements has no significant impact on the Group's net assets, liabilities, financial position, and profit or loss. The extent of business relations with non-consolidated Group companies and associated companies is as follows:

(in TEUR)	2019	2018
SALES AND OTHER OPERATING INCOME	26,080	15,190
with non-consolidated companies	23,410	15,076
with associated companies and joint ventures	2,670	114
EXPENSES	-20,519	-26,141
with non-consolidated companies	-20,508	-26,141
with associated companies and joint ventures	-11	0
TRADE AND OTHER RECEIVABLES	15,172	10,588
from non-consolidated subsidiaries	15,136	10,584
Gross amount	36,640	24,160
Valuation allowance	-21,504	-13,576
with associated companies and joint ventures	36	4
Gross amount	476	444
Valuation allowance	-440	-440
LIABILITIES	8,296	4,823
to non-consolidated companies	3,268	4,494
with associated companies and joint ventures	5,028	329

b) Related persons

Executive Board

The Executive Board of ANDRITZ AG was composed of five members as of December 31, 2019:

Name	Function	Date of first appointment to Executive Board	End of current mandate
Wolfgang Leitner	President & CEO	October 1, 1987 (CFO) June 29, 1994 (President & CEO)	June 28, 2023
Humbert Köfler	Member of the Executive Board	April 1, 2007	March 31, 2020
Norbert Nettesheim	Chief Financial Officer	December 6, 2019	September 30, 2022
Joachim Schönbeck	Member of the Executive Board	October 1, 2014	September 30, 2022
Wolfgang Semper	Member of the Executive Board	April 1, 2011	March 31, 2024

A company controlled by the President and CEO of ANDRITZ AG has ceded operation of a corporate jet aircraft owned by the company to a professional private aviation firm. The related expenses for business trips by the President and CEO and other members of the Executive Board amounted to 652 TEUR in 2019 (2018: 843 TEUR). As of December 31, 2019, a liability to this company amounting to 0 TEUR (2018: 12 TEUR) was recognized in this regard. These and other business relations with companies in which members of the Supervisory Board or the Executive Board of ANDRITZ AG are involved are conducted at usual market terms and are of minor importance, both individually and collectively.

The chairman of the Executive Board Wolfgang Leitner waived his remuneration as chairman of the Schuler AG Supervisory Board.

Custos Vermögensverwaltungs GmbH owns 25% plus one share, while Cerberus Vermögensverwaltung GmbH holds 0.77%. Some of the shares in these companies are held directly and some indirectly by Custos Privatstiftung and by Wolfgang Leitner, President and CEO of ANDRITZ AG, respectively. Certus Beteiligungs-GmbH, whose shares are owned indirectly by Manile Privatstiftung, holds 5.72%. The Takeover Commission has decided that, pursuant to § 23 (2), line 1 Takeover Act, the shares of Certus Beteiligungs-GmbH are attributable to Custos Privatstiftung.

At its meeting on December 5, 2019, the Supervisory Board resolved the compensation policy of ANDRITZ AG, which includes the principles of determining the compensation of the Executive Board, the Supervisory Board of ANDRITZ AG as well as the executives. The primary goal of the remuneration policy is to promote long-term and sustainable corporate development, above all in the interests of shareholders.

The remuneration of the Executive Board is composed of a fixed and a variable/success-based portion. The amount of the variable portion depends on the net profit. For contracts with members of the Executive Board, the maximum value for the variable annual remuneration was fixed at three times the fixed annual remuneration. Any amounts in excess of this sum will be carried forward as a variable remuneration to the following three years. If the net income of the Group falls short of a defined minimum amount, this results in a "malus" (negative bonus) that is also carried forward to the following years and is a reduction in future variable salary components. If there is a "negative bonus" at the time of leaving, this reduces the entitlements existing upon leaving. The other remunerations relate primarily to taxable benefits in kind for company cars.

Participation in all share option programs for managerial staff and the Executive Board since the Initial Public Offering (IPO), was contingent on investing at least 20 TEUR in ANDRITZ shares for managerial staff and 40 TEUR for members of the Executive Board no later than the allocation date of the options. This investment must be maintained continuously until exercise of the options by those persons subscribing to the option program and evidence thereof must be brought when the options are exercised. There is a waiting period of three years before options can be exercised if the contract of employment is still in force (exception: end of employment contract as scheduled according to contract provisions).

No advances or loans were granted to members of the ANDRITZ AG Executive Board.

The members of the Executive Board are entitled to receive pension scheme benefits. In addition to a retirement pension, these include benefits in the event of occupational disability as well as pension payments for dependents following the death of the beneficiary. The retirement pension is normally paid from a certain age provided that the employment contract has already been terminated by this date. The administration work has been outsourced to pension funds. Pension contracts are either defined contribution oriented or defined contribution oriented. In the event that the employment contract is terminated prematurely, contributions made up to this point shall still be vested. The pension amount to which the beneficiary is entitled is not subject to an escalation clause before any benefits become payable; after this, annual adjustments can be made to take account of the development in wages and salaries and of ANDRITZ's economic status.

Some members of the Executive Board shall, upon termination of their function and concurrent termination of employment, be entitled to severance payments in the meaning of section 23 of the Austrian Employees Act unless such termination is the result of justified dismissal. Severance payments in the event of premature termination without good cause of activities as member of the Executive Board are provided for in the Executive Board contracts according to Section 27 of the Austrian Salaried Employees Act.

The principles applied in establishing the remuneration of the Executive Board and of senior managers comply almost entirely with the Austrian Code of Corporate Governance.

The following expenses have been recognized for the Executive Board:

(in TEUR)	2019	2018
Short-term benefits	7,153	8,827
Post-employment benefits	506	5,281
Share-based payments	-657	556
TOTAL	7,002	14,664

In 2019, the share-based payments include the release of the 2016 management share option program due to the non-achievement of the performance conditions to the income statement.

A provision of 6,660 TEUR in 2019 (2018: 6,211 TEUR) was recorded for pensions of former members of the Executive Board and their dependents. Expenses for these pensions amounted to 182 TEUR in 2019 (2018: 180 TEUR).

ANDRITZ AG took out Directors' and Officers' liability insurance (D&O insurance) for 2019. The policyholder is ANDRITZ AG. The costs are carried by the company. The D&O insurance covers certain personal liability risks of persons in the ANDRITZ GROUP acting under responsibility. The annual costs amount to approximately 290 TEUR (2018: approximately 280 TEUR).

In connection with the execution of a project in Austria, two administrative criminal proceedings for alleged breach of the regulations concerning temporary hiring and employment of foreign nationals were opened against members of the ANDRITZ AG Executive Board and extremely high fines were imposed initially. An appeal was filed against these decisions. There was also a preliminary ruling by the European Court of Justice in favor of the Executive Board members in the course of a procedure to clarify certain preliminary legal questions relating in particular to the disputed admissibility of accumulating administrative penalties. In autumn 2019, the administrative court of the concerned province then finally granted the appeal and set the penalties aside. The costs of the defense amounting to approximately 350 TEUR will now be reclaimed from the Republic of Austria.

Supervisory Board

The ANDRITZ AG Supervisory Board consists of six appointed members and three delegated members by the employee representative organizations as of December 31, 2019.

Name	Function	Date of first appointment to Executive Board	End of current mandate
APPOINTED MEMBERS			
Christian Nowotny	Chairman of the Supervisory Board	December 29, 1999	Until the Annual General Meeting in 2022
Fritz Oberlerchner	Deputy-Chairman of the Supervisory Board	March 29, 2006	Until the Annual General Meeting in 2020
Jürgen Hermann Fechter	Member of the Supervisory Board	March 30, 2016	Until the Annual General Meeting in 2021
Alexander Isola	Member of the Supervisory Board	March 30, 2016	Until the Annual General Meeting in 2021
Monika Kircher	Member of the Supervisory Board	March 21, 2014	Until the Annual General Meeting in 2023
Alexander Leeb	Member of the Supervisory Board	March 27, 2019	Until the Annual General Meeting in 2023
DELEGATED MEMBERS			
Georg Auer	Member of the Supervisory Board	July 1, 2011	
Andreas Martinier	Member of the Supervisory Board	February 14, 2001	
Monika Suppan	Member of the Supervisory Board	January 1, 2018	

The remuneration scheme of the Supervisory Board is composed of a fixed and an attendance-related portion. The fixed portion is a total sum, which is to be distributed such that the chairman of the Supervisory Board receives double the amount and his deputy one-and-a-half-times the amount paid to the other members. The second portion consists of a lump sum fee paid in respect of each meeting that the member attends. Subject to approval by the Annual General Meeting, the Supervisory Board remunerations for the 2019 business year amount to a total of 313 TEUR (2018: 305 TEUR). No Supervisory Board remuneration was paid to the Supervisory Board members delegated by the employee representative organizations.

The chairman of the Supervisory Board, Christian Nowotny, is also a member of the Schuler AG Supervisory Board and received a remuneration amounting to 25 TEUR (excluding attendance fees) for the 2019 business year.

No advances or loans were granted to members of the ANDRITZ AG Supervisory Board. There were no agreements subject to approval between ANDRITZ AG and individual members of the Supervisory Board or companies closely associated with Supervisory Board members.

The law firm Graf & Pitkowitz Rechtsanwälte GmbH, in which the Supervisory Board member Alexander Isola acts as a partner, provided consultancy services as a legal advisor to ANDRITZ AG in the 2019 financial year. These mandates were settled at the respective applicable hourly rates of the law firm. The total volume of fees incurred in the financial year 2019 was around 500 TEUR (2018: 100 TEUR).

C) RESULT OF THE YEAR

8. Segment reporting

a) Business areas

For management purposes, the Group is divided into four business areas on a worldwide basis:

ANDRITZ Pulp & Paper (PP)

ANDRITZ Pulp & Paper provides equipment, systems, complete plants, and services for the production of all types of pulp, paper, board, and tissue. The technologies and services focus on maximum utilization of raw materials, increased production efficiency and sustainability as well as lower overall operating costs. Boilers for power production, flue gas cleaning plants, plants for the production of nonwovens and panelboard (MDF) as well as recycling and shredding solutions for various waste materials also form a part of this business area.

ANDRITZ Metals (ME)

ANDRITZ Metals is – via the Schuler Group – one of the world's leading suppliers of technologies, plants and digital solutions in sheet metal forming. The product portfolio also includes automation and software solutions, dies, process know-how, and service. In the metals processing segment, the business area provides innovative and market-leading solutions for production and processing of flat products, for welding systems as well as furnaces and services for the metals industry.

ANDRITZ Hydro (HY)

ANDRITZ Hydro is one of the globally leading suppliers of electromechanical equipment and services for hydropower plants. With over 175 years of experience and an installed fleet of more than 430 GW output, the business area provides complete solutions for hydropower plants of all sizes as well as services for plant diagnosis, refurbishment, modernization, and upgrade of existing hydropower assets. Pumps for irrigation, water supply, and flood control as well as turbo generators are also part of this business area's portfolio.

ANDRITZ Separation (SE)

ANDRITZ Separation provides mechanical and thermal technologies and services for solid/liquid separation, serving the chemical, environmental, food as well as mining and minerals industries. The customized, innovative solutions focus on minimizing the use of resources and achieving highest process efficiency, thus making a substantial contribution towards sustainable environmental protection. In addition, the business area offers technologies and services for the production of animal feed and biomass pellets.

These strategic business areas form the basis of the internal reporting structure to the Executive Board as the key decision maker. The accounting and valuation principles of the individual segments are the same as those of the Group. The segment Separation also contains the Feed & Biofuel Technologies business area for which the Executive Board obtains a separate reporting. As the thresholds of the Feed & Biofuel Technologies business area are below the limits, both business areas are condensed to one reportable segment. According to the internal reporting structure, all sales and all direct and indirect expenses (including overhead and administrative costs) are allocated to business areas and reflect the management structure of the organization and the predominant sources of risks and opportunities. The key measure of operating performance for the Group is Earnings Before Interest, Taxes, and Amortization (EBITA). There are no substantial intersegmental transactions. All consolidation effects related to the income statement are included in the relevant business area.

Business area information

2019

(in TEUR)	PP	ME	HY	SE	Total
Sales	2,869,458	1,636,861	1,470,746	696,831	6,673,896
EBITDA	351,393	-1,516	134,087	53,598	537,562
EBITA	270,991	-73,822	105,877	40,118	343,164
Capital expenditure	63,327	30,783	51,727	11,246	157,083
Depreciation, amortization, and impairment of intangible assets and of property, plant, and equipment	124,561	101,791	30,722	13,480	270,554
Result from associated companies and joint ventures	-12	-13	-100	0	-125
Shares in associated companies and joint ventures	0	487	4,315	0	4,802

2018

(in TEUR)	PP	ME	HY	SE	Total
Sales	2,233,166	1,635,112	1,517,522	645,655	6,031,455
EBITDA	258,396	57,769	142,395	39,489	498,049
EBITA	222,143	27,293	113,811	31,017	394,264
Capital expenditure	33,775	36,136	57,882	9,249	137,042
Depreciation, amortization, and impairment of intangible assets and of property, plant, and equipment	56,700	66,579	28,751	8,520	160,550
Result from associated companies and joint ventures	21	0	0	0	21
Shares in associated companies and joint ventures	0	0	17	0	17

b) Geographical segmentation

The Group's activities are mainly conducted in Europe, North America, South America, China, and Asia (without China). External sales allocated by geographical segments are based on the location of the customers. There are no sales from transactions with a single external customer that amount to 10% or more of the Group's sales.

Information according to geographical segments

2019

(in TEUR)	Europe	North America	South America	China	Asia (without China)	Rest of the world and consolidation	Total
External sales	2,327,419	1,416,581	770,640	979,297	899,055	280,904	6,673,896
Non-current assets	879,277	272,763	86,977	162,312	42,532	968,174	2,412,035
Capital expenditure	81,420	36,504	11,995	17,843	7,122	2,199	157,083

2018

(in TEUR)	Europe	North America	South America	China	Asia (without China)	Rest of the world and consolidation	Total
External sales	2,360,878	1,188,461	491,028	926,401	813,061	251,626	6,031,455
Non-current assets	704,065	444,256	52,178	113,267	22,698	985,934	2,322,398
Capital expenditure	64,696	17,195	32,423	18,628	3,790	310	137,042

External sales in Europe include an amount of 169,800 TEUR (2018: 180,448 TEUR) recognized in Austria. Non-current assets of 319,725 TEUR (2018: 338,611 TEUR) are located in Austria. Non-current assets consist of property, plant, and equipment, goodwill, intangible assets as well as other non-current receivables and assets.

9. Sales



ACCOUNTING POLICIES

Revenue covers all income resulting from the ANDRITZ GROUP's typical business activities and is generated in accordance with IFRS 15 from contracts with customers. Accordingly, ANDRITZ recognizes revenue when control of a promised product or service is transferred to a customer. The rules of IFRS 15 are implemented as part of the 5-step model: the model starts with the identification of the contract with the customer, followed by the identification of separate performance obligations. According to this, separately identifiable services as well as bundles of products and services are to be separated. In the third step, the transaction price is determined. The transaction price is the amount of the consideration to which the supplying company is entitled as expected in exchange for the goods or services supplied. Subsequently, the transaction price is split up to the identified performance obligations. In the last step, the revenue recognition is realized when the performance obligation is satisfied. Revenue recognition is realized either over time or at a point in time.

The large majority of revenues at ANDRITZ are recognized **over time**. Over time revenue recognition in accordance with performance progress is made using in- or output-oriented methods. Projects that are recognized over time are characterized by fixed prices agreed upon on the basis of individual contract terms. The performance progress is established mainly by the input-oriented method ("cost-to-cost method"). In applying the cost-to-cost method, sales and profits are recorded in consideration of the ratio of accumulated costs to the estimated total costs to complete. Changes to total estimated project costs and losses, if any, are recognized in the income statement for the period in which they are determined. An individually assessed amount is included in the estimated project costs for each project for technological and financial risks that might occur during the remaining project period. Impending losses on the valuation of projects are recognized when it is probable that the total project costs will exceed the sales. For possible costs of rectification, provisions are accounted for according to the profit realization. Upon completion of a project, the remaining warranty risk is reassessed.

If the criteria according to IFRS 15 for revenue recognition over time are not met, the revenue is recognized **at a point in time**. At ANDRITZ, a customer obtains control over a promised product or service mainly when the asset is accepted or when the risks and rewards of ownership are transferred.

Contract balances

In case advance and progress payments received from customers exceed the performance progress for contracts with the revenues recognized over time, contract liabilities from sales recognized over time are recorded, otherwise contract assets are recognized. Advance payments received from customers for contracts recognized at a point in time are presented as contract liabilities from sales recognized at a point in time in the balance sheet.

Contract assets and contract liabilities are within the ordinary business cycle of ANDRITZ and are reported as current assets or liabilities, respectively. Amounts originally recorded as contract assets are reclassified to trade receivables at the time when invoiced to customers. In case several contracts with a customer are to be combined into one package, the contract assets and contract liabilities are netted.

a) Nature of products and services, timing of satisfaction of performance obligations, and significant payment terms

ANDRITZ is a supplier of plants, equipment, and services for the pulp and paper industry (Pulp & Paper), the metalworking and steel industries (Metals), hydropower stations (Hydro), and for solid/liquid separation in the municipal and industrial sectors as well as for animal feed and biomass pelleting (Separation).

— [Read more in Note 8.](#) Segment reporting.

Within **capital systems**, ANDRITZ fulfills the performance obligations using the input-oriented method (cost-to-cost method) if the conditions for the revenue recognition over time according to performance progress are met. Within capital systems, the criteria for revenue recognition over time are on the one hand the fact that there is no alternative use and on the other hand, that ANDRITZ has an enforceable right to payment for performance completed to date (costs plus an appropriate margin). If the criteria according to IFRS 15 for revenue recognition

over time are not met, the performance obligations are met at a point in time, as soon as a customer obtains control over a promised product or service. This is especially the case when the asset is finally accepted. Payments and down payments of customers are made – depending on the content of the contract – already before the project starts and/or in regular intervals or after reaching certain milestones.

In the **service** business, ANDRITZ basically fulfills the performance obligations with simultaneous use by the customer while the service is rendered. Revenue is recognized over time. For services on site at the customer's premises, repairs or maintenance with a short runtime or execution time, the revenue is recognized at a point in time. The invoicing of services by ANDRITZ and the payment by the customer are made on a regular basis.

Invoices will be issued in accordance with the terms and conditions of the contract, whereby the terms of payment depend, among other things, on the country risk or customer credit risk.

With regard to the satisfaction of the performance obligations, it is evaluated whether two or more contracts with customers are to be combined into one performance obligation or whether one contract with a customer is to be divided into several performance obligations. If a contract is divided into several performance obligations, the total consideration is allocated to the respective performance obligations on the basis of the estimated individual selling prices. Since ANDRITZ's products and services predominantly represent customer-specific solutions, the individual selling prices are mainly the expected costs plus a margin. Contracts with customers may also contain variable components such as bonuses, contractual penalties or other claims from the customer or from ANDRITZ. Variable consideration is taken into account to the extent that they are most likely to occur.

In the financial year 2019, there were neither contracts nor financing commitments implied by terms of payment, which have significant financing components.

For projects with contractually agreed standardized **warranty services** ("assurance-type-warranty"), ANDRITZ recognizes provisions in accordance with revenue recognition. In exceptional cases where an additional warranty, beyond the standard ("service-type-warranty") is contractually agreed upon, a separate performance obligation arises, to which part of the contingent consideration is attributed.

b) Disaggregation of sales

The following table shows the external sales of ANDRITZ by business areas:

	Pulp & Paper		Metals		Hydro		Separation		Total	
(in TEUR)	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
REGIONS										
Europe	936,871	959,726	696,408	708,956	473,267	486,630	220,873	205,566	2,327,419	2,360,878
North America	613,207	418,695	349,860	365,932	271,769	231,042	181,745	172,792	1,416,581	1,188,461
South America	568,866	296,735	47,062	28,220	91,798	108,760	62,914	57,313	770,640	491,028
Asia (without China)	335,029	186,560	91,637	119,050	374,559	409,719	97,830	97,732	899,055	813,061
China	314,730	299,317	436,928	405,790	126,963	143,545	100,676	77,748	979,297	926,400
Others	100,755	72,133	14,966	7,164	132,390	137,826	32,793	34,504	280,904	251,627
	2,869,458	2,233,166	1,636,861	1,635,112	1,470,746	1,517,522	696,831	645,655	6,673,896	6,031,455
TIMING OF REVENUE RECOGNITION										
Over time	1,595,905	1,340,056	1,028,403	973,019	1,177,771	1,269,120	247,694	230,307	4,049,773	3,812,502
At a point in time	1,273,553	893,110	608,458	662,093	292,975	248,402	449,137	415,348	2,624,123	2,218,953
	2,869,458	2,233,166	1,636,861	1,635,112	1,470,746	1,517,522	696,831	645,655	6,673,896	6,031,455
SALES CATEGORIES										
Capital systems	1,434,293	1,187,379	1,197,402	1,254,291	994,305	1,080,985	381,626	353,664	4,007,626	3,876,319
Service	1,435,165	1,045,787	439,459	380,821	476,441	436,537	315,205	291,991	2,666,270	2,155,136
	2,869,458	2,233,166	1,636,861	1,635,112	1,470,746	1,517,522	696,831	645,655	6,673,896	6,031,455

c) Contract balances

ANDRITZ recognizes contract assets in the context of revenue recognition over time in case the performance progress exceeds advance payments received from customers. In the financial year 2019, cumulative impairment on contract assets was reduced by 617 TEUR (2018: was increased by 738 TEUR). Due to acquisitions, contract assets increased by 13,840 TEUR (2018: 12,667 TEUR). Amounts originally presented as contract assets are reclassified to trade receivables at the time when rights become unconditional. This usually happens when the invoice is issued to the customer.

Advance payments received from customer contracts with revenue recognition at a point in time are presented in the balance sheet item contract liabilities from sales recognized at a point in time and are generally recognized as sales in the subsequent fiscal year. If advance payments received from customers exceed the performance progress in the context of the revenue recognized over time, contract liabilities from sales recognized over time are recorded. The amount of 897,372 TEUR (2018: 900,871 TEUR) recognized in contract liabilities from sales recognized over time at the beginning of the period has been recorded as sales of the period ended as of December 31, 2019. Due to acquisitions, contract liabilities increased by 26,208 TEUR (2018: 12,526 TEUR).

Cumulative catch-up adjustments to revenue, including adjustments arising from a change in the measure of progress, a change in an estimate of the transaction price or a contract modification as well as revenue recognized in the reporting period from performance obligations (partially) satisfied in previous periods amount to less than one percent of the total sales of a fiscal year.

d) Transaction price assigned to the remaining performance obligations

The following overview shows the order backlog as of December 31, 2019 with expected sales recognition in the following periods:

(in TEUR)	2020	2021 and later	Total
Pulp & Paper	2,281.0	883.3	3,164.3
Metals	1,232.0	300.7	1,532.7
Hydro	1,221.9	1,439.1	2,661.0
Separation	374.5	45.1	419.6
	5,109.4	2,668.2	7,777.6

ANDRITZ has not made use of the practical expedient in accordance with IFRS 15.121.

e) Contract costs

ANDRITZ assumes that sales commissions paid to intermediaries as a result of concluding the contract are eligible for reimbursement. At ANDRITZ, all contract costs can be attributed directly to the contract initiation. The capitalized contract costs are included in balance sheet item "Other receivables" and amount to 11,614 TEUR as of December 31, 2019 (2018: 13,005 TEUR). According to the project progress, 4,532 TEUR were amortized in the financial year 2019 (2018: 6,138 TEUR). In the fiscal year, no significant impairment losses were recorded.



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

Over time revenue recognition in accordance with performance progress is made using in- or output-oriented methods. The accounting for revenue that is recognized over time is based on estimations for project costs, recoverable revenue as well as project risks including technical, political, and financial risks. These estimations are reviewed and adjusted regularly. Although these estimations are based on all information available on the balance sheet date, substantial changes after the balance sheet date are possible.

The evaluation of whether two or more contracts with customers are to be combined into one performance obligation or whether a contract with a customer must be split into several performance obligations requires estimates that may affect the recognition of revenue or profit. Variable consideration is estimated at the most likely amount. Estimates are based primarily on expectations as well as on historical, current, and forecasted information available as of the balance sheet date.

10. Other operating income

(in TEUR)	2019	2018
Government grants	25,621	23,865
Insurance income	9,452	2,887
Profit on disposal of intangible assets and property, plant, and equipment	8,934	8,397
Rental income	8,498	8,869
Income from scrap material	5,792	6,137
Exchange rate gains	3,096	0
Miscellaneous	34,808	39,115
	96,201	89,270

Miscellaneous other operating income includes, but is not limited to, income from payments of receivables written off and the release of other provisions.

11. Cost of materials

(in TEUR)	2019	2018
Expenses for raw materials, supplies, and goods purchased	2,574,373	2,238,852
Expenses for services purchased	730,817	748,885
	3,305,190	2,987,737

12. Personnel expenses

(in TEUR)	2019	2018
Wages and salaries	1,601,154	1,423,063
Expenses for social security contributions as required by law as well as salary-based charges and compulsory contributions	245,382	230,067
Other social expenses and termination expenses	112,211	72,815
Pension expenses	48,781	54,686
Severance expenses	7,692	6,367
	2,015,220	1,786,998

The number of employees within the ANDRITZ GROUP is composed as follows:

(headcount)	2019	2018
Employees (as of end of period; without apprentices)	29,513	29,096
Average	29,519	26,538

13. Other operating expenses

(in TEUR)	2019	2018
Sales expenses	195,456	197,850
Travel expenses	176,345	176,113
Repairs and maintenance	112,915	84,758
Legal, consulting, and audit expenses	100,968	90,259
Administrative expenses	53,725	57,276
Expenses for energy and water	46,720	35,238
Insurance premiums and charges	41,127	33,517
Rents and lease expenses	32,322	78,066
Other taxes and charges	22,546	20,656
Bank charges, guarantees, and similar expenses	22,331	25,481
Further training expenses to employees	10,561	10,548
Expenses for valuation allowance and bad debt losses for receivables	9,611	8,139
Expenses for industrial patents, rights, licenses	8,845	8,532
Exchange rate losses	0	10,726
Miscellaneous	50,440	9,245
	883,912	846,404

Miscellaneous other operating expenses include, but are not limited to, charges to public institutions and losses from the disposal of intangible assets and property, plant, and equipment.

14. Depreciation, amortization, and impairment of intangible assets and property, plant, and equipment

(in TEUR)	2019	2018
Intangible assets		
Depreciation and amortization	82,507	58,574
Impairment losses	89	4,247
Property, plant, and equipment		
Depreciation and amortization	168,688	96,373
Impairment losses	19,270	1,356
	270,554	160,550

The increase in depreciation of property, plant, and equipment compared to the previous year is due to the implementation of IFRS 16 and the acquisition of companies. Impairment on property, plant, and equipment items was mainly recorded for technical equipment in Germany and Hungary. These impairment losses are attributable to the Metals and the Hydro business areas.

15. Financial result

The financial result comprises the following:

(in TEUR)	2019	2018
Result from associated companies and joint ventures	-125	21
Interest income	21,246	22,068
Interest expenses	-69,267	-46,549
Other financial result	-8,824	7,079
	-56,970	-17,381

Interest expenses contain 8,939 TEUR (2018: 6,236 TEUR) for interest expense on obligations for pensions, severance payments, and jubilee payments as well as on expected return on plan assets and interest expenses on leases of 5,541 TEUR.

The item "Other financial result" consists of gains and losses from disposal of securities of -186 TEUR (2018: 4,825 TEUR), exchange rate gains and losses on loans and cash accounts in the amount of -3,694 TEUR (2018: -2,127 TEUR) as well as dividend income from investments amounting to 3,092 TEUR (2018: 786 TEUR). It also includes a one-time effect from the impairment of a loan due from a deconsolidated entity in the amount of 6,530 TEUR.

16. Income taxes



ACCOUNTING POLICIES

Income taxes include current and deferred taxes. Current and deferred taxes are recognized in profit or loss except to the extent that the taxes are linked to a business combination or to items recognized in other comprehensive income. Current taxes are the expected tax due (or tax receivable) on the taxable income (or the tax loss) for the financial year based on the applicable income tax rates and all adjustments to the tax debt in respect of previous years. Actual tax liabilities also contain all tax debts arising as a result of dividends being declared. Current tax receivables and liabilities are offset if a legal right exists towards a tax authority to settle on a net basis. In the case of values determined in tax statements that cannot be realized the expected effects of these uncertain tax positions are considered.

Deferred taxes are recognized in respect of temporary differences between the net book value of assets and liabilities in the IFRS consolidated financial statements and their tax bases at the level of the subsidiaries. Deferred taxes are not recognized for

- taxable temporary differences in the initial recognition of goodwill
- temporary differences in the initial recognition of assets or liabilities in a business transaction which is not a business combination and affects neither the accounting profit nor the taxable profit
- temporary differences in connection with shares in subsidiaries, associated companies, and joint ventures provided that the Group is able to control the timing of the reversal of the temporary difference and it is likely that the temporary difference will not be reversed in the foreseeable future.

Deferred taxes are measured in accordance with the taxation rates (and regulations) applicable on the balance sheet date or which have essentially been passed as law and are expected to be applicable on the date when the deferred tax credits are realized or deferred tax liabilities are settled. A deferred tax asset is recognized for unused tax losses, unused tax credits, and deductible temporary differences to the extent that it is probable that future taxable profit will be available against which it can be utilized. Deferred tax credits are assessed at every reporting date and reduced to the extent to which it is no longer likely that the related tax advantage will be realized. Provided that the deferred taxes relate to the same taxable entity, the same tax authority, and that there is also a legally enforceable right to offset actual tax receivables against actual tax liabilities, deferred tax assets and liabilities are offset.

Within the ANDRITZ GROUP, a tax group consists of ANDRITZ AG as head and ANDRITZ HYDRO GmbH as member of the tax group according to section 9 KStG 1988 (Austrian Corporate Tax Act). A tax compensation agreement was concluded. Furthermore, several fiscal unities with profit and loss absorption agreements exist between selected affiliated companies in Germany. In addition, comparable tax groups exist in the USA, United Kingdom, France, Italy, and the Netherlands.

Income taxes comprise the following:

(in TEUR)	2019	2018
Current taxes	-85,384	-73,424
Deferred taxes	27,221	-11,117
	-58,163	-84,541

The reconciliation of the calculated income tax expense to the effective tax expense is defined below. The calculated tax expense in the amount of 45,229 TEUR is determined by multiplying the Earnings Before Taxes in the amount of 180,916 TEUR by the applicable tax rate for ANDRITZ AG of 25%:

(in TEUR)	2019	2018
Earnings Before Taxes (EBT)	180,916	304,234
Calculated tax expense (25% in 2019 and 25% in 2018)	-45,229	-76,059
Increase (-)/Decrease (+) of tax expense by:		
Non-tax-deductible expenses	-11,747	-12,591
Tax allowances and tax-exempted income	8,715	5,822
Foreign tax rate differential arising from foreign fiscal jurisdictions	4,958	7,400
Effects of changes in tax rates	-1,236	810
Taxes for prior years	23,513	9,810
Change in valuation allowance; non-recognition of deferred tax assets	-25,781	-6,461
Non-deductible impairment of goodwill	-7,731	-2,591
Non-allowable withholding taxes; foreign operating site taxes	-9,236	-14,329
Tax-exempted income from changes in consolidation scope	1,320	4,293
Others	4,291	-645
Effective tax expense	-58,163	-84,541
in % of EBT	-32.1%	-27.8%

The nominal income tax rates applicable for subsidiaries abroad were between 9.0% and 34.0% (2018: 9.0% and 34.9%) in the financial year.

The changes in deferred taxes in the statement of financial position are as follows:

(in TEUR)	2019	2018
Deferred tax assets	167,157	152,647
Deferred tax liabilities	-184,368	-87,892
Balance as of January 1	-17,211	64,755
Change in accounting policies	0	2,193
Deferred taxes recognized in income statement	27,221	-11,117
Deferred taxes recognized in other comprehensive income	9,618	5,119
Changes in consolidation scope	-667	-75,041
Currency translation adjustments	834	-3,120
Balance as of December 31	19,795	-17,211
Thereof:		
Deferred tax assets	179,457	167,157
Deferred tax liabilities	-159,662	-184,368

Deferred tax assets and liabilities as of December 31, 2019 and 2018 are the result of the following temporary valuation differences between the book values of the statement of financial position according to IFRS and the relevant tax bases:

(in TEUR)	2019		2018	
	Deferred taxes		Deferred taxes	
	Assets	Liabilities	Assets	Liabilities
Intangible assets	5,525	-73,990	4,593	-89,611
Property, plant, and equipment	12,812	-99,734	10,544	-65,379
Financial assets	6,675	-4,947	1,743	-22,295
Inventories	216,822	-3,009	302,059	-1,420
Receivables and other assets	80,952	-163,452	69,872	-158,865
	322,786	-345,132	388,811	-337,570
Provisions	137,052	-25,442	151,266	-25,415
Liabilities	105,133	-209,092	95,130	-318,329
	242,185	-234,534	246,396	-343,744
Tax loss carry forwards	210,204	0	188,033	0
Deferred taxes before non-recognition and netting	775,175	-579,666	823,240	-681,314
Non-recognized deferred tax assets	-175,714	0	-159,137	0
	599,461	-579,666	664,103	-681,314
Netting	-420,004	420,004	-496,946	496,946
Net deferred tax assets and liabilities	179,457	-159,662	167,157	-184,368

On the balance sheet date, the Group has operating loss carry forwards (gross values) amounting to 963,602 TEUR (2018: 852,872 TEUR). Thereof, corporate tax loss carry forwards amount to 227,072 TEUR (2018: 147,836 TEUR) and trade tax loss carry forwards amount to 212,246 TEUR (2018: 131,691 TEUR).

Non-recognition of deferred tax assets apply to the following (gross values):

(in TEUR)	2019	2018
Deductible temporary differences	114,333	83,919
Tax loss carry forwards	549,833	530,266

The unrecognized tax loss carry forwards (gross values) include an amount of 15,541 TEUR, which are subject to expiration within the next five years. German tax groups contain frozen corporate tax loss carry forwards of 10,422 TEUR as well as frozen trade tax loss carry forwards of 7,860 TEUR.

The deductible temporary partial write-downs (amounts for outstanding sevenths from tax write-downs on investments) calculated in accordance with Austrian tax law amounted to 2,703 TEUR (2018: 12,940 TEUR). Deferred tax assets were recognized in the amount of 676 TEUR (2018: 3,235 TEUR).

Regarding investments in subsidiaries, branches, and associated companies as well as in interests in joint arrangements no deferred tax liabilities were recognized for temporary differences in the amount of 266,755 TEUR (2018: 199,553 TEUR).

! SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

Estimates of the future realization of deferred tax assets are decisive in assessing the recognition and recoverability of deferred tax assets. This realization is dependent on the generation of future taxable profits during the periods in which taxable temporary differences reverse and tax loss carryforwards can be utilized. This assessment takes account of the probability of the deferred tax liabilities being reversed as well as the future taxable profits. It could have adverse effects on the assets, financial, and earnings situation, if the actual results deviate from these estimates or if these estimates need to be adjusted in future periods. Effects of uncertain tax positions include the best estimation of the expected tax payment. In the future, new information could be available causing the management to change the assumptions.

17. Earnings per share

Basic earnings per share (as stated subsequently in the consolidated income statement) were calculated by dividing the net income for the period attributable to shareholders of the parent by the weighted average number of ordinary shares outstanding during the period.

Diluted earnings per share were calculated by dividing the net income for the period attributable to shareholders of the parent by the weighted average number of ordinary shares outstanding during the period with consideration of share options.

(in TEUR)	2019	2018
Net income attributable to shareholders of the parent	127,804	221,991
Weighted average number of no-par value shares	100,411,757	101,009,544
Effect of potential dilution of share options	0	0
Weighted average number of no-par value shares and share options	100,411,757	101,009,544
Basic earnings per no-par value share (in EUR)	1.27	2.20
Diluted earnings per no-par value share (in EUR)	1.27	2.20

D) NON-CURRENT ASSETS AND LIABILITIES

18. Intangible assets



ACCOUNTING POLICIES

Intangible assets are accounted for at cost. After initial recognition, intangible assets are accounted for at cost less accumulated amortization and any accumulated impairment losses. The intangible assets have a finite useful life and are therefore amortized on a straight-line basis over the best estimate of their useful lives. The amortization period and the amortization method are reviewed annually at the end of the fiscal year. Amortization is calculated predominantly using the following estimated useful lives:

Acquired technology and similar rights	
Order backlog	1 - 3 years
Customer relationships	3 - 10 years
Brand names	7 - 15 years
Technology	4 - 10 years
Other intangible assets	
Concessions, industrial rights, and similar rights	3 - 15 years
Development cost	3 - 5 years

Intangible assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the net book value of an asset may be higher than the amount recoverable (the higher amount of fair value less costs to sell and value in use of an asset or of a cash generating unit). Whenever the net book value of an asset exceeds its recoverable amount, an impairment loss is recognized.

Research expenditures are expensed as incurred. Development costs are capitalized if the recognition criteria of IAS 38 are met. The company capitalizes the development expenditures at production costs. The costs include all costs directly attributable to the development process as well as proportionate overhead costs. If the conditions are not met the expenses are recorded in the year in which they arise.

Intangible assets are as follows:

(in TEUR)	Acquired customer- and technology- related intangible assets	Other intangible assets	Total
COST			
Balance as of December 31, 2017	265,055	82,793	347,848
Additions	0	6,880	6,880
Disposals	-10,715	-2,615	-13,330
Reclassification	0	-1,441	-1,441
Currency translation adjustments	2,452	-500	1,952
Changes in consolidation scope	267,862	143	268,005
Balance as of December 31, 2018	524,654	85,260	609,914
Additions	0	6,992	6,992
Disposals	-25,120	-11,976	-37,096
Reclassification	0	169	169
Currency translation adjustments	4,604	186	4,790
Changes in consolidation scope	7,412	24	7,436
Balance as of December 31, 2019	511,550	80,655	592,205
ACCUMULATED DEPRECIATION			
Balance as of December 31, 2017	-123,874	-63,273	-187,147
Depreciation and amortization	-53,042	-5,532	-58,574
Impairment losses	-3,724	-523	-4,247
Disposals	10,715	2,303	13,018
Reclassification	0	40	40
Currency translation adjustments	-512	429	-83
Balance as of December 31, 2018	-170,437	-66,556	-236,993
Depreciation and amortization	-76,160	-6,347	-82,507
Impairment losses	0	-89	-89
Disposals	25,120	11,979	37,099
Currency translation adjustments	-418	-78	-496
Changes in consolidation scope	0	-22	-22
Balance as of December 31, 2019	-221,895	-61,113	-283,008
NET BOOK VALUE			
Balance as of December 31, 2018	354,217	18,704	372,921
Balance as of December 31, 2019	289,655	19,542	309,197

a) Research and development costs

Expenses for research and non-capitalized development costs amount to 114,973 TEUR (2018: 108,850 TEUR in the 2019 financial year. Development costs at 3,786 TEUR (2018: 0 TEUR) were capitalized as internally generated intangible assets in the item "other intangible assets" in the 2019 financial year.

b) Collateral securities

As of December 31, 2019 there were restrictions on the use of collateral for intangible assets of 120 TEUR (as of December 31, 2018: 0 TEUR).



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The anticipated useful lives of intangible assets are subject to critical judgment and are reviewed at every balance sheet date. If the current estimate of the useful lives differs significantly from the previous ones, these will be adjusted accordingly.

The impairment analyses for intangible assets are primarily based on discounted estimated future cash flows to be expected from the continued use and disposal of an asset at the end of its useful life. Factors such as lower than

anticipated sales and resulting decreases of net cash flows as well as changes in the discount rates used, could lead to an impairment.

19. Goodwill



ACCOUNTING POLICIES

Goodwill is measured as the residual of the cost of the business combination after recognizing the acquired identifiable assets, liabilities, and contingent liabilities at fair value. Following a review of the amounts stated, the resulting value from the comparison of cost and fair value of the net assets of the acquired negative goodwill is recognized immediately in the income statement.

Goodwill is not amortized, but tested for impairment. This test is performed at least annually or more frequently if events or changes in circumstances indicate a need for impairment. ANDRITZ performs the annual goodwill impairment test at September 30 of each business year. In determining whether the recognition of an impairment loss is required, goodwill is allocated to the cash generating units that are expected to benefit from the synergies of the business combination. If the net book value exceeds the value in use which is calculated by using a discounted cash flow (DCF) calculation and the fair value less costs of disposal is not higher, an impairment loss is recognized. An impairment loss recognized for goodwill will not be reversed in a subsequent period.

The planning is done at the level of the cash generating units for the next three years. Future payment surpluses are based on internal forecasts, which are prepared in detail for the next financial year and with simplifications for the subsequent two years, reflecting the historical performance and best estimates on future developments. After this detailed planning horizon a normalized development is assumed.

The discount rate used for the DCF calculation is based on an interest rate representing the actual assessment of possible changes in exchange rates as well as specific risks of an asset. In consideration of the applicable currency and the corresponding risk profile, a discount rate before tax was applied.

Goodwill develops as follows:

(in TEUR)	2019	2018
COST		
Balance as of January 1	1,034,378	776,356
Changes in consolidation scope	827	251,467
Remeasurement from acquisitions	16,976	0
Disposals	-71,969	0
Currency translation adjustments	6,090	6,555
Balance as of December 31	986,302	1,034,378
ACCUMULATED IMPAIRMENT		
Balance as of January 1	-249,788	-228,720
Impairment loss	-29,123	-15,884
Disposals	71,969	0
Currency translation adjustments	-2,445	-5,184
Balance as of December 31	-209,387	-249,788
NET BOOK VALUE		
Balance as of January 1	784,590	547,637
Balance as of December 31	776,915	784,590

The carrying amount of goodwill is allocated to the business areas as follows:

(in TEUR)	2019	2018
Hydro	113,404	112,037
Pulp & Paper	366,740	353,321
Metals	267,031	289,516
Separation	29,740	29,716
	776,915	784,590

a) Remeasurement (IFRS 3)

In the 2019 financial year, a remeasurement for the CGU Xerium was recorded in accordance with IFRS 3 because new information about facts and circumstances that existed at the date of acquisition was obtained within one year of the date of acquisition. In addition to that, adjustments for other acquisitions of minor importance were made during the measurement period.

b) Impairment loss

In the 2019 financial year, an impairment of goodwill was recorded in the amount of 29,123 TEUR because the business did not develop as expected. The impairment relates to the cash generating unit Yadon for product lines and technologies in China and another CGU in Germany; both are assigned to the Metals business area. The recoverable amounts of these cash generating units correspond to their values in use.

In 2019, the discount rate before taxes of Yadon (MYA) was 9.91% and the growth rate 4.25%. In 2018, impairment losses of 15,884 TEUR were recorded in the Pulp & Paper (8,884 TEUR) and Separation (7,000 TEUR) business areas.

c) Cash generating units

The following tables show the significant cash generating units and groups of cash generating units, respectively:

2019

CGU	Year of purchase	Business area	Goodwill (in TEUR)	Discount rate before tax (in %)	Non-current growth rate (in %)	Description
Xerium	2018	PP	220,139	10.87	2.19	Manufacturing and supply of machine clothing (forming fabrics, press felts, drying fabrics) and roll covers for paper, tissue, and board machines
Schuler	2013	ME	215,061	9.53	2.09	Presses, automation, dies, process know-how, and services in the forming equipment field
Large Hydro (HLH)	2006	HY	45,868	11.11	1.93	Electromechanical systems and services for hydropower plants (including products and services for small and medium-sized hydroelectric power plants and solutions for mini hydro power plants) as well as modernization, rehabilitation, and capacity increases
Service Rehab (HSR)	2006-2014	HY	42,087	9.15	2.28	Modernization, rehabilitation, and capacity increases of electromechanical systems and services for hydropower plants
Diatec	2018	PP	33,925	12.43	3.06	Special machines and technological solutions, mainly for the production of baby diapers and other absorbent hygiene products
Kraft & Paper Mill Services (PKP)	2000-2011	PP	30,710	9.56	2.43	Production systems and services for sawmills, wood yard, fiberlines, pulp drying plants, chemical recovery operations, and power island
Separation	2004-2012	SE	24,542	10.38	2.42	Mechanical technologies such as centrifuges, filters, screens, thickeners or separators, and thermal technologies such as dryers or coolers as well as service
Engineered Wear Parts (PEW)	1999-2003	PP	18,680	9.99	2.33	Engineered wear products for the pulp & paper industry
Mill Solutions (MMS)	1997-2014	ME	16,641	9.61	2.28	Turnkey systems for the production and processing of hot- and cold-rolled strip made of stainless steel, coated metals, nonferrous metals, and special materials
Compact Hydro (HCH)	2006	HY	15,000	10.30	1.96	Products and services for small and medium-sized hydroelectric power plants and solutions for mini hydro power plants
Other CGUs			114,262			
			776,915			

The Yadon (MYA) CGU was impaired in the financial year 2019 and is therefore no longer included in the main cash generating units.

In the financial year 2019, the structure of two CGUs has been adjusted due to changes of the internal structure. The Strip Processing & Rolling (MPR) CGU was split into two CGUs in financial year 2019, but was mainly allocated to Mill Solutions (MMS) CGU. The goodwill was tested on the basis of the new as well as of the old structure.

2018

CGU	Year of purchase	Business area	Goodwill (in TEUR)	Discount rate before tax (in %)	Non-current growth rate (in %)	Description
Schuler	2013	ME	215,061	9.06	2.39	Presses, automation, dies, process know-how, and services in the forming equipment field
Xerium	2018	PP	207,510	11.30	2.32	Manufacturing and supply of machine clothing (forming fabrics, press felts, drying fabrics) and roll covers for paper, tissue, and board machines
Large Hydro (HLH)	2006	HY	45,594	11.38	2.42	Electromechanical systems and services for hydropower plants (including products and services for small and medium-sized hydroelectric power plants and solutions for mini hydro power plants) as well as modernization, rehabilitation, and capacity increases
Service Rehab (HSR)	2006-2014	HY	41,308	9.24	2.42	Modernization, rehabilitation, and capacity increases of electromechanical systems and services for hydropower plants
Diatec	2018	PP	33,925	14.02	2.32	Special machines and technological solutions, mainly for the production of baby diapers and other absorbent hygiene products
Kraft & Paper Mill Services (PKP)	2000-2011	PP	30,571	10.55	2.32	Production systems and services for sawmills, wood yard, fiberlines, pulp drying plants, chemical recovery operations, and power island
Yadon (MYA)	2016	ME	27,710	9.21	4.56	Presses in the forming equipment field
Separation	2004-2012	SE	24,542	10.81	2.55	Mechanical technologies such as centrifuges, filters, screens, thickeners or separators, and thermal technologies such as dryers or coolers as well as service
Strip Processing & Rolling (MPR)	1997-2014	ME	18,597	9.53	2.19	Turnkey systems for the production and processing of hot- and cold-rolled strip made of stainless steel, coated metals, nonferrous metals, and special materials
Engineered Wear Parts (PEW)	1999-2003	PP	18,049	10.96	2.32	Engineered wear products for the pulp & paper industry
Compact Hydro (HCH)	2006	HY	15,000	10.14	2.42	Products and services for small and medium-sized hydroelectric power plants and solutions for mini hydro power plants
Other CGUs			106,723			
			784,590			



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The impairment test for goodwill requires estimations regarding the development of future sales, margins and consequent cash flows as well as assumptions for determining the used discount rate and therefore includes certain inherent uncertainties. Factors such as lower than anticipated sales and resulting decreases of net cash flows as well as changes in the discount rates used, could lead to an impairment.

In order to validate the values in use determined as of December 31, 2019, other scenarios were conducted with respect to the calculation parameters described above. The management considered the following scenarios possible:

- A change of +/-0.5 percentage points in the discount rate
- A change of +/-10 percentage points in the planned cash flows
- A change of +/-0.5 percentage points in the planned growth rates

The change would have resulted in the following effects on goodwill impairment, provided all other parameters remained the same:

(in TEUR)		2019	2018
Discount rate	+0.5%	-78,707	-12,282
	-0.5%	27,220	5,638
Planned cash flows	+10%	14,903	2,573
	-10%	-96,741	-31,832
Planned growth rates	+0.5%	808	4,635
	-0.5%	-212	-11,380

20. Property, plant, and equipment



ACCOUNTING POLICIES

Property, plant, and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses. When assets are sold or retired, their costs and accumulated depreciation are removed from the accounts and any resulting gain or loss is included as other operating income or as other operating expenses in the income statement. The cost of property, plant, and equipment comprises its purchase price including import duties and non-refundable purchase taxes as well as any directly attributable costs of bringing it to the appropriate location for its intended use and putting the asset into working condition. The production costs of self-constructed assets contain direct material and production costs as well as adequate indirect material and production costs. Expenditure incurred after the fixed assets have been put into operation, such as maintenance and repair, is charged to the income statement in the period in which the costs are incurred.

Assets under construction are considered as plant and properties under construction and are stated at cost.

Depreciation is calculated on a straight-line basis predominantly using the following estimated useful lives:

Buildings	20 - 50 years
Technical equipment and machinery	4 - 10 years
Tools, office equipment, and vehicles	3 - 10 years

The useful lives and the depreciation method are reviewed periodically to ensure that the method and period of depreciation are consistent with the expected pattern of economic benefits from items of property, plant, and equipment.

Property, plant, and equipment are reviewed for impairment losses whenever events or changes in circumstances indicate that the net book value of an asset may be higher than the amount recoverable (the higher amount of fair value less costs to sell and value in use of an asset or of a cash generating unit). Whenever the net book value of an asset exceeds its recoverable amount, an impairment loss is recognized. Recoverable amounts are estimated for individual assets or, if this is not possible, for the cash generating unit.

Government grants

Government grants related to assets are deducted from the cost of the asset. Grants related to income are recorded as other operating income in the income statement.

Borrowing costs

Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are generally capitalized as part of the cost of the asset. All other costs of borrowing are expensed in the period in which they are incurred.

Property, plant, and equipment is as follows:

(in TEUR)	Land and buildings	Technical equipment and machinery	Other equipment, factory and office equipment	Assets under construction and advance payments	Total
COST					
Balance as of December 31, 2017	549,205	644,198	193,708	101,696	1,488,807
Additions	43,202	32,863	19,811	34,286	130,162
Disposals	-1,767	-19,097	-16,141	-96	-37,101
Reclassification	57,672	32,864	7,883	-96,978	1,441
Currency translation adjustments	3,450	-1,170	-2,138	-117	25
Changes in consolidation scope	136,159	188,224	8,835	7,573	340,791
Balance as of December 31, 2018	787,921	877,882	211,958	46,364	1,924,125
Change in accounting policies	203,140	5,942	19,619	0	228,701
Additions	41,351	31,793	33,662	42,791	149,597
Disposals	-23,437	-34,375	-23,269	-82	-81,163
Reclassification	18,770	22,263	4,472	-45,674	-169
Currency translation adjustments	7,261	2,781	574	416	11,032
Changes in consolidation scope	371	812	-57	0	1,126
Adjustments in the measurement period of IFRS 3	718	-12,323	-483	0	-12,088
Reclassification as held for sale	-2,786	-20,476	-1,481	0	-24,743
Balance as of December 31, 2019	1,033,309	874,299	244,995	43,815	2,196,418
ACCUMULATED DEPRECIATION					
Balance as of December 31, 2017	-192,756	-403,110	-130,674	0	-726,540
Depreciation and amortization	-20,515	-53,610	-22,248	0	-96,373
Impairment losses	0	-1,293	-63	0	-1,356
Disposals	467	17,747	14,761	0	32,975
Reclassification	-57	-3	19	1	-40
Currency translation adjustments	-2,728	1,553	1,320	-1	144
Changes in consolidation scope	-99	-786	84	0	-801
Balance as of December 31, 2018	-215,688	-439,502	-136,801	0	-791,991
Depreciation and amortization	-58,382	-74,441	-35,865	0	-168,688
Impairment losses	-5,369	-13,774	-128	1	-19,270
Disposals	7,480	30,173	21,106	-1	58,758
Currency translation adjustments	-814	-812	-356	-1	-1,983
Changes in consolidation scope	138	-176	73	1	36
Adjustments in the measurement period of IFRS 3	-19	4,555	106	0	4,642
Reclassification as held for sale	0	16,229	1,087	0	17,316
Balance as of December 31, 2019	-272,654	-477,748	-150,778	0	-901,180
NET BOOK VALUE					
Balance as of December 31, 2018	572,233	438,380	75,157	46,364	1,132,134
Balance as of December 31, 2019	760,655	396,551	94,217	43,815	1,295,238

a) Collateral securities

As of December 31, 2019, property, plant, and equipment amounting to 47,846 TEUR (as of December 31, 2018: 48,161 TEUR) have been pledged as collateral security.

b) Commitments

The commitments arising from contracts for expenditure on property, plant, and equipment are only within the ordinary scope of business. As of December 31, 2019, these commitments amounted to 20,181 TEUR (as of December 31, 2018: 22,986 TEUR).

c) Borrowing costs

No borrowing costs relating to qualifying assets were capitalized in the financial years 2019 and 2018 as the amounts were immaterial.

d) Government grants

In the 2019 financial year, government grants amounting to 334 TEUR (2018: 312 TEUR) were paid for capital expenditure on buildings, plant, and machinery and offset against costs. Other grants in the amount of 25,621 TEUR (2018: 23,865 TEUR) were recognized directly as other operating income.



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The anticipated useful lives of intangible assets are subject to critical judgment and are reviewed at every balance sheet date. If the current estimate of the useful lives differs significantly from the previous ones, these will be adjusted accordingly.

The impairment analyses for property, plant, and equipment are based primarily on discounted estimated future cash flows to be expected from the continued use and disposal of an asset at the end of its useful life. Factors such as lower than anticipated sales and resulting decreases of net cash flows as well as changes in the discount rates used, could lead to an impairment.

21. Right of use assets from lease contracts and lease liabilities



ACCOUNTING POLICIES

A lease is an agreement in which the lessor grants the lessee the right to use an asset for an agreed period in return for one payment or a series of payments. IFRS 16 defines a comprehensive model for the identification of leasing agreements and their treatment in the financial statement of lessees and lessors. Lessees make a distinction between service and leasing. ANDRITZ only records the lease payments on the balance sheet, the service payments are recorded directly as an expense. Lessors distinguish between finance and operating leases.

IFRS 16 – Leases replaces the previous regulations of IAS 17 – Leases and eliminates the previous classification of leases on the lessee's side in operating and finance leases. The lessee shows most leases and the associated right of use assets and lease liabilities on the balance sheet. Exceptions for the recognition of leases can be applied. ANDRITZ uses some practical expedients. Leasing contracts that involve an intangible asset are not recorded. This also applies to contracts for assets that are of low value or contracts that have a short term. A uniform discount rate was used for portfolios with similarly structured leasing contracts. The new leasing definition was applied to old and new contracts. Contracts were reassessed when they were first recorded. The retention of the original estimates for old contracts ("grandfathering" method) was not applied. Several leasing components and non-leasing components can exist within a contract. ANDRITZ has decided to separate these components and to balance them on the basis of the relative individual selling prices.

Lessee

At inception of a contract ANDRITZ assesses whether a contract is, or contains, a lease. A lease is a contract, or part of a contract, that conveys the right to control the use of an identified asset for a period of time in exchange for a consideration. The lease term is the non-cancellable period for which a lessee has the right to use an underlying asset, plus, if applicable periods covered by an option to extend the lease if the lessee is reasonably certain to exercise that option and/or periods covered by an option to terminate the lease if the lessee is reasonably certain not to exercise that option.

At initial recognition ANDRITZ recognizes a lease liability for the obligation to make lease payments in the future and capitalizes a right to use the underlying asset:

- The lease liability is measured at present value of the lease payments not paid at the commencement date, discounted by the interest rate implicit in the lease or if not readily determined the incremental borrowing rate. The borrowing rates were determined based on a reference interest rate plus a risk premium.
- Lease payments comprise fixed payments, including in-substance fixed payments and variable lease payments that depend on an index or a rate. Variable payments based on the future performance of the asset are not

defined as lease payments. Further included are amounts expected to be payable under a residual value guarantee, the exercise price of a purchase option that is reasonably certain to be exercised, lease payments in an optional renewal period if it is reasonably certain to exercise an extension option and penalties for early termination of a lease if it is reasonably certain to terminate early.

- The right of use asset is measured at cost and comprises the initial amount of the lease liability adjusted for any advance payments plus initial direct costs incurred and an estimate of costs of dismantling and removing or restoring the underlying asset or the site on which it is located, less any lease incentives received.

At subsequent measurement the right of use asset is depreciated using the straight-line method from the commencement date to the end of the lease term. In case the ownership of the underlying asset is transferred to ANDRITZ at the end of the lease term or the cost of the right of use asset reflects that a purchase option will be exercised, the underlying asset is depreciated until the end of the useful life. The general depreciation rules according to IAS 16 and impairment rules according to IAS 36 are applied.

The lease liability is measured using the effective interest method. A revaluation of the interest rate takes place if the future lease payments change due to an adjustment of the index or the (interest) rate used, the term of the lease or if the amounts payable under a residual value guarantee change. When the lease liability is remeasured in this way, the corresponding adjustment is made to the carrying amount of the right of use asset.

Lessor

ANDRITZ only has operating leases as lessors. With operating leasing, the main opportunities and risks associated with the use of the asset remain with the lessor. Leasing income is recorded on a straight-line basis over the term of the respective lease. The initial direct costs involved in negotiating and brokering an operating lease are added to the book value of the leased asset and recognized on a straight-line basis over the lease term.

a) ANDRITZ as lessee

The Group has entered into various (former operating and finance) lease agreements for real estate, machinery, vehicles, and other assets as lessee. Property, plant, and equipment shown in the balance sheet comprise owned and leased assets that do not meet the definition of investment property.

Information about groups of right of use assets is presented below.

(in TEUR)	2019
Property, plant, and equipment owned	1,075,116
Right of use assets	220,122
thereof land and buildings	195,339
thereof cars	16,674
thereof technical equipment and machinery	5,727
thereof other equipment, factory and office equipment	2,382
	1,295,238

Additions to the right of use assets during 2019 amounted to 47,454 TEUR. Total cash outflow for leases in 2019 was recorded at 51,524 TEUR. The following amounts were recognized in the income statement:

(in TEUR)	2019
Expenses for variable lease payments that were not included in the calculation of the lease liability	3,167
Expenses for short-term leases that were not included in the calculation of the lease liability	14,099
Lease expenses on low value assets that were not included in the calculation of the lease liability	4,284
Interest expenses for lease liabilities	5,541
Depreciation of right of use assets	45,692
thereof land and buildings	33,604
thereof cars	8,927
thereof technical equipment and machinery	1,743
thereof other equipment, factory and office equipment	1,418

The average weighted interest rate on the lease liabilities was 2.16% during the 2019 financial year. The leasing agreements contain no restrictions on the group's activities regarding dividends or additional debts. There are no significant subleases under operating and finance leases. Lease payments for leases that the leaseholder has entered into but have not yet started amount to 1,963 TEUR in 2019.

Information on material leases

Real estate leases

ANDRITZ leases land and buildings for office space, production and storage. The leases for land and buildings generally have an average term of 9.1 years. In several cases, leases provide for additional payments based on changes of local price indices. ANDRITZ has defined a building lease in the context of a business combination as an onerous contract. The right of use asset was adjusted by a liability recognized for this onerous contract and the balance as of December 31, 2019 is 20,636 TEUR.

Some leases for land and buildings contain extension options that the Group can exercise up to one year before the end of the non-cancellable term of the contract. The Group endeavors to include extension options in new leasing contracts if this is practicable to ensure operational flexibility. The extension options held can only be exercised by the Group and not by the lessors. At the start of the lease, the Group assesses whether the exercise of the extension options is reasonably certain. The Group evaluates whether it is possible to exercise the options with sufficient certainty if there is a significant event or a significant change in the circumstances over which it has an influence. The Group estimates that the potential future lease payments, if the extension options are exercised, would lead to a lease liability of 918 TEUR.

Other leases

In the vehicles category, ANDRITZ mainly leases cars for employees with an average leasing period of 3.6 years in the 2019 financial year. In some cases, ANDRITZ has options to purchase the assets at the end of the contract term; in other cases, it guarantees the residual value of the leased assets end of contract.

The leased technical equipment includes machines and other vehicles that are used in factories and warehouses. The usual average contract terms for this category of right of use assets are 5.6 years in 2019.

In addition, other equipment, factory, and office equipment are leased for use by the staff. The usual average contract terms for this category of right of use assets are 5.0 years in 2019. Many contracts in this category comprise low value items which are expensed immediately. ANDRITZ monitors the usage of these vehicles and equipment and reviews the estimated amount to be paid as part of the residual value guarantees as of the balance sheet date in order to revalue the lease liabilities and the right of use assets. As of December 31, 2019, ANDRITZ estimates the expected remaining guarantee amounts are not material.

b) ANDRITZ as lessor

In the financial year 2019, leasing income of 8,498 TEUR (2018: 8,869 TEUR) was generated. The contracts largely refer to real estate. The future minimum lease payments from the non-cancellable leases are as follows:

(in TEUR)	2019	2018
Not exceeding 1 year	6,222	5,390
1 to 2 years	3,381	
2 to 3 years	2,687	
o 4 years	2,319	4,551
4 to 5 years	2,319	
More than 5 years	10,141	7,451
Total undiscounted lease payments	27,069	17,392



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

When applying the appropriate accounting methods for classifying leases, management makes critical judgments.

Impairment tests for right of use assets are mainly based on estimated discounted net future cash flows that can be expected from the continued use of an asset and its disposal at the end of its useful life. Factors such as lower sales, the resulting lower net cash flows and changes in the discounting factors used can lead to an impairment.

Discretionary decisions are made when interpreting the options and defining the original price of items of low value.

The determination of the term of the lease is an essential criterion when applying IFRS 16. The useful lives of the right of use assets are usually defined by contract. If not, the expected useful lives of the right of use assets are subject to discretionary decisions and are reviewed on every balance sheet date. In addition to the usual useful life of the leased assets, other factors influence the critical judgment. These include extension options, early termination options, additions or extensions to the leased asset and economic effects of contract changes. If the current estimate of the useful lives differs significantly from the previous ones, these are adjusted accordingly.

22. Provisions



ACCOUNTING POLICIES

A provision is recognized when the enterprise has a current obligation (legal or constructive) as a result of a past event and it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made regarding the amount of the obligation. Provisions are measured at the expected settlement amount. Provisions are reviewed at each balance sheet date and are adjusted to reflect the current best estimate. When the effect of the time value of money is significant, a non-current provision is recorded at the present value of the expenditure expected to be required to settle the obligation.

Non-current provisions

(in TEUR)	Pensions	Severance payments	Anniversary bonuses	Order-related	Others	Total
Balance as of January 1, 2019	296,043	111,115	26,037	110,300	36,214	579,710
Additions	21,462	8,972	1,500	46,161	27,820	105,915
Unwinding of discount effect	5,921	1,775	1,243	0	8	8,947
Usage	-11,455	-9,044	-236	-2,310	-2,790	-25,835
Release	3,768	-680	-89	-38,026	-11,708	-46,735
Reclassification	0	0	-301	-25,030	-1,485	-26,816
Currency translation adjustments	3,141	98	36	411	258	3,943
Reclassification as held for sale	-3,683	0	-386	0	-115	-4,184
Other changes	-4,363	0	2,551	0	134	-1,678
Balance as of December 31, 2019	310,834	112,236	30,355	91,506	48,336	593,267

Current provisions

(in TEUR)	Order-related	Others	Total
Balance as of January 1, 2019	398,588	39,389	437,977
Additions	197,385	46,754	244,139
Usage	-66,801	-14,861	-81,662
Release	-133,868	-6,017	-139,885
Reclassification	23,075	3,741	26,816
Currency translation adjustments	1,558	-413	1,145
Changes in consolidation scope	480	0	480
Other changes	0	837	837
Balance as of December 31, 2019	420,417	69,430	489,847



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

Provisions are recognized and measured based on estimates of the extent and probability of future events as well as estimates of the discount rate. As far as possible, these are based on past experience.

a) Personnel-related provisions (Employee benefits)



ACCOUNTING POLICIES

Some Group companies provide defined benefit pension plans for particular employees. Provisions for pension obligations are established for benefits payable in the form of retirement, disability, and surviving dependents' pensions. The benefits offered vary according to the legal, fiscal, and economic conditions in each country. Benefits are dependent on years of service and, in some cases, on the respective employee's compensation.

In some countries there is a legal obligation to make severance payments in certain cases of termination of employment. No severance payments are made in the event of a voluntary resignation of the employee. Appropriate provisions are made for severance payment obligations.

The obligations are valued every year by professionally qualified and independent actuaries by using the projected unit credit method, different discount rates for different countries, and different average terms, respectively. This method assumes that in each year of service an additional part of the final benefit entitlement is earned and assesses each of these separately to build up the final obligation. The plan assets are deducted at fair value from the gross obligation. This results in the net debt and the net asset value, respectively, to be reported. Due to the net interest approach, the Group determines the net interest cost (net interest income) by multiplying the net debt (net asset value) at the beginning of the period by the interest rate based on the discounting of the performance-related gross obligation at the beginning of the period. The net interest component resulting from obligations and plan assets is recognized as interest expenses in the consolidated income statement. Remeasurement effects regarding pension and severance are shown in other comprehensive income for the year. The remeasurement components include the actuarial gains and losses from measurement of the performance-related gross obligation on the one hand and the difference between actually realized return on plan assets and the typically assumed return at the beginning of the period on the other hand. In the event that the plan has been overfunded, the remeasurement component also contains the change in net asset value from applying the asset ceiling if this has not been considered in the net interest component. If the present value of a defined benefit obligation changes as a result of plan amendments or curtailments, ANDRITZ shows the resulting effects in profit or loss for the period. Past service costs are generally recognized at the time the plan amendment occurs.

Some Group companies provide defined contribution plans for certain employees. The related costs are expensed as they occur.

The post-employment benefits are divided into defined contribution and defined benefit plans.

Pensions

(in TEUR)	2019	2018
EXPENSES FROM DEFINED BENEFIT PLANS		
Current service cost	9,151	8,245
Past service cost	-96	6,503
Effects of plan curtailments and settlements	81	14
EXPENSES FROM DEFINED CONTRIBUTION PLANS		
Payments to defined contribution plans	39,645	39,924
	48,781	54,686

According to IAS 19, the defined benefit plans for pensions are broken down according to the different geographic locations. The pension plans largely relate to Germany, Austria, and Switzerland. The "Others" category primarily comprises USA and Canada.

The basic actuarial assumptions for the calculation of the pension obligations as of December 31 are as follows:

2019

		Germany and Austria	Switzerland	Others
Discount rate	in %	0.62 - 1.42	0.25 - 0.29	0.33 - 7.50
Wage and salary increases	in %	0.00 - 2.50	0.50 - 1.00	0.00 - 6.33
Retirement benefit increases	in %	1.75	0.00	0.00 - 4.75
Average term of the benefit obligation	in years	6.06 - 18.25	14.51 - 20.10	8.30 - 17.86

2018

		Germany and Austria	Switzerland	Others
Discount rate	in %	1.43 - 2.26	0.75 - 0.99	0.39 - 7.50
Wage and salary increases	in %	0.00 - 2.50	0.50	0.00 - 6.33
Retirement benefit increases	in %	2.00	0.00	0.00 - 3.20
Average term of the benefit obligation	in years	6.41 - 17.61	14.32 - 18.50	8.08 - 17.12

The following mortality tables were primarily used:

	2019	2018
Austria	AVÖ 2018-P	AVÖ 2018-P
Germany	Heubeck "Richttafeln 2018 G"	Heubeck "Richttafeln 2018 G"
Switzerland	BVG 2015 Generationentafel	BVG 2015 Generationentafel

The following tables show the changes in pension benefit obligation from January 1 to December 31:

2019

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Defined benefit obligation as of January 1	261,367	216,521	197,539	675,427
Current service cost	2,943	4,613	1,595	9,151
Past service cost	0	0	-96	-96
Effects of plan curtailments and settlements	-85	175	64	154
Interest expenses	5,320	2,016	6,412	13,748
Actuarial gains (-) and losses (+) from change in demographic assumptions	-62	-7,916	-1,755	-9,733
Actuarial gains (-) and losses (+) from change in financial assumptions	22,957	17,339	22,330	62,626
Actuarial gains (-) and losses (+) from change in experience adjustments	3,094	-516	1,109	3,687
Benefits paid	-14,840	-10,511	-8,849	-34,200
Contributions by the plan participants	3,881	2,782	43	6,706
Currency translation adjustments	0	8,383	10,444	18,827
Reclassification as held for sale	-3,683	0	0	-3,683
Other changes	16,761	0	-22,584	-5,823
Defined benefit obligation as of December 31	297,653	232,886	206,252	736,791
Fair value of plan assets	-47,813	-217,948	-162,576	-428,337
Reduction of assets	0	0	2,380	2,380
Defined benefit liability as of December 31	249,840	14,938	46,056	310,834

2018

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Defined benefit obligation as of January 1	254,548	213,697	76,604	544,849
Current service cost	3,004	4,780	461	8,245
Past service cost	5,900	0	603	6,503
Effects of plan curtailments and settlements	0	155	-2	153
Interest expenses	4,849	1,581	3,297	9,727
Actuarial gains (-) and losses (+) from change in demographic assumptions	2,924	0	160	3,084
Actuarial gains (-) and losses (+) from change in financial assumptions	-1,576	-3,057	-3,304	-7,937
Actuarial gains (-) and losses (+) from change in experience adjustments	-938	-1,365	-210	-2,513
Benefits paid	-10,835	-9,781	-5,687	-26,303
Contributions by the plan participants	3,491	2,743	3	6,237
Currency translation adjustments	0	7,846	-2,550	5,296
Changes in consolidation scope	0	0	128,164	128,164
Other changes	0	-77	0	-77
Defined benefit obligation as of December 31	261,367	216,522	197,539	675,428
Fair value of plan assets	-45,628	-199,488	-136,913	-382,029
Reduction of assets	0	0	2,644	2,644
Defined benefit liability as of December 31	215,739	17,034	63,270	296,043

Out of the total pension benefit obligation of 736,791 TEUR (2018: 675,428 TEUR), 440,624 TEUR (2018: 422,878 TEUR) are covered entirely or partly by investments in funds.

The following tables reconcile the fair value of the plan assets:

2019

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Fair value of plan assets as of January 1	45,628	199,488	136,913	382,029
Interest income	959	1,906	4,962	7,827
Return on plan assets (excl. interest income)	2,105	12,474	17,819	32,398
Effects of plan curtailments and settlements	-85	158	0	73
Benefits paid	-3,702	-10,511	-8,532	-22,745
Contributions by the employer	2,908	3,769	5,066	11,743
Contributions by the plan participants	0	2,782	5	2,787
Currency translation adjustments	0	7,882	7,802	15,684
Other changes	0	0	-1,459	-1,459
Fair value of plan assets as of December 31	47,813	217,948	162,576	428,337

2018

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Fair value of plan assets as of January 1	46,149	197,843	61,496	305,488
Interest income	988	1,474	2,564	5,026
Return on plan assets (excl. interest income)	-1,683	-3,875	-8,852	-14,410
Effects of plan curtailments and settlements	0	139	0	139
Benefits paid	-2,104	-9,823	-5,767	-17,694
Contributions by the employer	2,278	3,649	2,848	8,775
Contributions by the plan participants	0	2,743	3	2,746
Currency translation adjustments	0	7,415	-2,472	4,943
Changes in consolidation scope	0	0	87,093	87,093
Other changes	0	-77	0	-77
Fair value of plan assets as of December 31	45,628	199,488	136,913	382,029

The plan assets are invested as follows:

2019

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Equity instruments	11,518	39,066	71,223	121,807
thereof listed on an active market	7,832	39,066	71,223	118,121
Debt instruments	11,522	64,565	82,717	158,804
thereof listed on an active market	11,492	64,565	82,716	158,773
Property, plant, and equipment	795	49,995	314	51,104
thereof listed on an active market	131	0	314	445
Other assets	23,978	64,322	8,322	96,622
thereof listed on an active market	21,771	53,142	1,943	76,856
	47,813	217,948	162,576	428,337

2018

(in TEUR)	Germany and Austria	Switzerland	Others	Total
Equity instruments	10,712	37,939	61,260	109,911
thereof listed on an active market	6,884	37,939	61,260	106,083
Debt instruments	10,322	60,818	67,461	138,601
thereof listed on an active market	10,295	60,818	67,461	138,574
Property, plant, and equipment	718	47,007	73	47,798
thereof listed on an active market	116	4,033	73	4,222
Other assets	23,876	53,724	8,119	85,719
thereof listed on an active market	22,451	23,278	2,144	47,873
	45,628	199,488	136,913	382,029

In 2019, the actual investment results from plan assets amounted to 9.07% (2018: -1.51%).

As of December 31, 2019, there are no extraordinary risks specific to the company or to the plan, or any substantial risk concentrations.

Expected payments to the pension funds for defined benefit plans are estimated at 26,160 TEUR for 2020.



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

For the valuation of various pension plans, parameters such as the expected discount rate, increases of salary and pension payments as well as the return on plan assets are used. If the relevant parameters develop significantly differently than expected, this can have a material impact on the provision and, subsequently, on the Group's related expenses.

The sensitivity analysis of the existing provisions for pensions is based on key actuarial assumptions. A change of +/- 0.5 percentage points in the discount factor, +/- 0.5 percentage points in the salary increase, +/- 0.5 percentage points in pension benefits, and +/- 1 year in life expectancy would have the following effects on the present value of the pension obligation, if all other parameters remained unchanged:

2019

(in TEUR)		Germany and Austria	Switzerland	Others	Total
Discount rate	+0.5%	-21,416	-16,680	-13,406	-51,502
	-0.5%	24,121	19,067	15,025	58,213
Wage and salary increases	+0.5%	668	1,719	622	3,009
	-0.5%	-620	-1,748	-589	-2,957
Retirement benefit increases	+0.5%	14,144	9,254	3,745	27,143
	-0.5%	-12,909	0	-3,091	-16,000
Life expectancy	+1 year	13,663	6,982	6,669	27,314
	-1 year	-13,463	-7,078	-6,626	-27,167

2018

(in TEUR)		Germany and Austria	Switzerland	Others	Total
Discount rate	+0.5%	-15,511	-14,469	-12,014	-41,994
	-0.5%	19,094	16,473	13,414	48,981
Wage and salary increases	+0.5%	731	1,395	778	2,904
	-0.5%	-674	-1,437	-751	-2,862
Retirement benefit increases	+0.5%	11,248	7,305	1,843	20,396
	-0.5%	-8,731	-1,446	-1,475	-11,652
Life expectancy	+1 year	9,595	5,643	7,160	22,398
	-1 year	-9,493	-5,766	-7,225	-22,484

Severances

The expenses for severance payments consist of:

(in TEUR)	2019	2018
EXPENSES FROM DEFINED BENEFIT PLANS		
Current service cost	3,729	3,455
EXPENSES FROM DEFINED CONTRIBUTION PLANS		
Payments to defined contribution plans	3,963	2,912
	7,692	6,367

In the financial year 2019, contributions of 2,257 TEUR (2018: 2,023 TEUR) to the employees severance funds (MVK), a defined contribution plan, are included in the severance expenses in Austria.

A breakdown of severance obligations to the various geographical locations has been omitted because these obligations relate to about 90% to Austria.

The actuarial assumptions used for Austria to determine the severance obligations as of December 31, 2019 are as follows:

(in %)		2019	2018
Discount rate	in %	0.84 - 1.61	1.68 - 1.75
Wage and salary increases	in %	0.00 - 2.50	2.50 - 3.00
Average term of the benefit obligation	in years	8.22 - 15.00	9.24 - 15.00

The following table shows the development of defined benefit obligations from January 1 to December 31:

(in TEUR)	2019	2018
Defined benefit obligation as of January 1	113,026	102,113
Current service cost	3,729	3,455
Interest expenses	1,926	1,778
Actuarial gains (-) and losses (+) from change in demographic assumptions	-709	582
Actuarial gains (-) and losses (+) from change in financial assumptions	6,994	-1,499
Actuarial gains (-) and losses (+) from change in experience adjustments	-1,011	646
Benefits paid	-9,807	-6,845
Currency translation adjustments	85	-290
Changes in consolidation scope	0	13,086
Defined benefit obligation as of December 31	114,233	113,026
Fair value of plan assets	-1,997	-1,911
Defined benefit liability as of December 31	112,236	111,115

The following table reconciles the fair value of plan assets:

(in TEUR)	2019	2018
Fair value of plan assets as of January 1	1,911	1,878
Interest income	151	149
Return on plan assets (excl. interest income)	-29	-26
Benefits paid	-763	-135
Contributions by the employer	740	118
Currency translation adjustments	-13	-73
Fair value of plan assets as of December 31	1,997	1,911

The plan assets are invested as follows:

(in TEUR)	2019	2018
Debt instruments	1,228	1,268
thereof listed on an active market	0	0
Other assets	769	643
thereof listed on an active market	214	172
	1,997	1,911



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

For the valuation of employee benefits, parameters such as the expected discount rate, increases of salary and pension payments as well as the return on plan assets are used. If the relevant parameters develop significantly differently than expected, this can have a material impact on the provision and, subsequently, on the Group's related expenses.

The sensitivity analysis of the existing provisions for severances is based on key actuarial assumptions. A change of +/- 0.5 percentage points in the discount factor, and +/- 0.5 percentage points in the salary increase would have the following effects on the present value of the severance obligation, if all other parameters remained unchanged:

(in TEUR)		2019	2018
Discount rate	+0.5%	-5,456	-5,096
	-0.5%	5,833	5,526
Wage and salary increases	+0.5%	5,629	5,262
	-0.5%	-5,244	-4,906

b) Order-related provisions

Order-related provisions include provisions for warranties, impending losses, and other order-related risks. The warranty provisions recorded are based on past experience and individual assessments; they represent the legal and contractual warranty obligations as well as voluntary commitments to customers. Order-related imminent losses are provided for customer projects not yet completed.

Generally, ANDRITZ expects the order-related non-current provisions to result in cash outflows during the next three years. Order-related current provisions are expected to result in cash outflows within the next fiscal year.

c) Other provisions

Other non-current and other current provisions contain restructurings and adjustments of personnel costs at 73,292 TEUR (2018: 31,483 TEUR). They relate primarily to the optimization of the value chain in the Metals (Forming) business area. To ensure future competitiveness, it is planned to close a production site in Germany and make personnel adjustments. A large part of the resulting outflows of economic benefits is expected for 2020.

E) NET WORKING CAPITAL

23. Trade accounts receivable

Trade accounts receivable are as follows:

(in TEUR)	2019	2018
Gross amount of trade accounts receivable	993,878	1,032,381
Valuation allowance	-62,074	-58,264
TRADE ACCOUNTS RECEIVABLE	931,804	974,117

All trade accounts receivable are classified as current. The disposal limitations arising due to the granting of collateral securities amount to 10,809 TEUR (2018: 13,592 TEUR). The parties receiving collateral security have no rights allowing them to sell or repledge the collateral securities provided.

— [Read more details on valuation in Note 28.](#) Financial assets and liabilities.

— [Read more on payments overdue and development of impairment in Note 33.](#) Risk management – Risks relating to financial instruments.

24. Other receivables and assets

(in TEUR)	2019	2018
Receivables from value-added tax and from other taxes and changes	142,456	122,092
Derivatives	40,084	49,734
Prepayments and deferred charges	32,144	34,424
Schuldscheindarlehen	30,000	0
Bills of exchange receivable	20,402	24,842
Contract costs	11,614	13,005
Receivables from associated companies, joint ventures, and non-consolidated companies	4,871	5,116
Miscellaneous	85,131	87,773
	366,702	336,986
thereof current	336,017	304,233
thereof non-current	30,685	32,753

Miscellaneous other receivables and assets include, but are not limited to, receivables from public institutions, deposits, and debit creditors. The carrying amount of other receivables pledged as collateral amounts to 0 TEUR (2018: 4,742 TEUR).

25. Inventories



ACCOUNTING POLICIES

Inventories, including work in progress and unfinished services, are valued at the lower of purchase or production cost and net realizable value after valuation allowances for obsolete and slow-moving items. The net realizable value is the selling price in the ordinary course of business minus costs of completion, marketing, and distribution. Cost is determined either by the average method or on the basis of the FIFO method. For processed inventories, cost also includes the applicable allocation of fixed and variable overhead costs. Inventories no longer usable are fully written-off. Changes in inventories of finished goods and work in progress serve to neutralize expenses for inventories still in stock on the balance sheet date.

Inventories consist of the following:

(in TEUR)	2019	2018
Materials and supplies	317,112	302,373
Work in progress and unfinished services	405,498	429,288
Finished goods and merchandise	119,779	137,613
	842,389	869,274

The write-down of inventories recognized as an expense amounted to -21,703 TEUR (2018: 791 TEUR). In the financial year, no substantial reversal of write-down was captured as a reduction of cost of materials. The book value of inventories carried at net realizable value amounted to 273,065 TEUR (2018: 211,438 TEUR). The carrying amount of inventories pledged as security for liabilities amounted to 8,498 TEUR (2018: 10,639 TEUR).

26. Advance payments made

The advance payments made and presented in the consolidated statement of financial position relate to procurement processes both, specifically for customer orders and general inventories.

27. Other liabilities

(in TEUR)	2019	2018
Accruals and outstanding order-related costs	428,201	425,863
Unused vacation and other personnel-related accruals	255,667	252,584
Liabilities from value-added tax and from other taxes and charges	94,241	60,964
Derivatives	51,780	53,581
Earn out and contingent considerations	26,466	98,612
Liabilities due to employees	26,434	24,811
Liabilities from social security	16,836	18,221
Liabilities from commissions	15,087	16,289
Liabilities due to associated companies and joint ventures	5,028	0
Prepayments and deferred charges	4,516	7,289
Miscellaneous	53,936	76,165
	978,192	1,034,379
thereof current	935,028	975,265
thereof non-current	43,164	59,114

Miscellaneous other liabilities include, but are not limited to, accrued interest and credit accounts receivable.

F) FINANCIAL AND CAPITAL STRUCTURE, FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

28. Financial assets and liabilities



ACCOUNTING POLICIES

A financial instrument is a contract that gives rise to both a financial asset for one entity and a financial liability or equity instrument for another entity. Financial instruments are accounted for on the trading day. Financial assets and financial liabilities included in the balance sheet comprise cash and cash equivalents, investments and other financial assets, trade receivables and payables as well as a portion of other receivables and other liabilities, bank and other financial liabilities, issued bonds, and Schuldscheindarlehen.

Financial assets and financial liabilities are recognized in the consolidated balance sheet when the Group becomes a party to the contractual arrangements of the financial instrument. Initial recognition is at fair value plus

transaction costs. This does not apply to financial assets categorized as "at fair value through profit or loss". For these instruments the initial recognition is made at fair value without consideration of transaction costs. Financial instruments are netted if the Group has a legally enforceable right to netting and intends to settle either only the balance or both the receivable and the liability at the same time.

Categories and subsequent measurement of financial assets

For all recognized financial assets, subsequent measurement is carried out at amortized cost or at fair value, depending on the classification category. The classification and measurement approach for financial assets takes the business model into account in which the assets are held and the characteristic of the cash flows. The following three classification categories for financial assets are distinguished:

- valued at amortized cost
- valued at fair value through profit and loss (FVTPL)
- valued at fair value through other comprehensive income (FVTOCI)

The classification category is determined by type of instrument: derivatives, equity instrument, and debt instrument.

Upon subsequent measurement, **derivatives** are valued at FVTPL.

— **Read more details about measurement in Note 32.** Derivatives.

A **debt instrument** is measured at **amortized cost** if it meets both of the following conditions and is not designated as FVTPL:

- it is held within a business model whose objective is to hold assets in order to collect contractual cash flows; and
- its contractual terms lead to cash outflows on certain dates, which are solely principal and interest payments on the outstanding principal amount.

In the Group, trade receivables, loans, and other receivables with fixed or determinable payments that are not quoted on an active market belong to this category. These assets are measured at amortized cost using the effective interest method. The amortized costs are reduced by impairment losses. Interest income, foreign exchange gains and losses, derecognition effects, and impairments are recognized in profit or loss.

A **debt instrument** is valued at **FVTOCI** if it meets both of the following conditions and is not designated as FVTPL:

- it is held within a business model whose objective is both, to collect contractual cash flows and to sell financial assets; and
- its contractual terms lead to cash outflows on certain dates, which are solely principal and interest payments on the outstanding principal amount.

These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, currency gains and losses and impairments are recognized in profit or loss. Other net gains and losses are recognized in OCI. Upon derecognition, the cumulative gains and losses in OCI are reclassified to the income statement. In the Group, no instrument is assigned to this category in the financial year.

All **debt instruments** that are not measured at amortized cost or FVTOCI as described above are measured at **FVTPL**. In addition, upon initial recognition, the Group may irrevocably designate a financial asset that meets the requirements to be measured at amortized cost or at FVTOCI to be measured at FVTPL if it eliminates or substantially reduces an accounting mismatch. This option is not exercised within the Group. This category includes financial instruments acquired either mainly for the purpose of being sold or bought back at short notice. Debt instruments to obtain profits from short-term fluctuations in the market price or from the trader's margin are not held. Any gain, including interest, or loss resulting from the valuation is recognized in profit or loss.

An **equity investment** is generally measured at **FVTPL** because it is held for trading or because it is irrevocably decided upon initial recognition to not present subsequent changes in fair value in OCI but in the income statement. This choice is made for each investment individually. Equity instruments that are held to gain profits from short-term fluctuations in the market price or from the trader's margin are not held. Any gain, including dividend income, or loss resulting from the valuation is recognized in profit or loss.

The Group has decided to measure individual **equity investments** at **FVTOCI**. These assets are subsequently measured at fair value. Dividends are recognized in profit or loss unless the dividend is clearly a reimbursement of part of the investment cost. Other net gains and losses are recognized in OCI and are not reclassified to profit or loss.

Categories and subsequent measurement of financial liabilities

The valuation of financial liabilities depends on their classification in certain categories, which are distinguished and explained as follows:

- valued at fair value through profit or loss (FVTPL)
- valued at amortized cost

The Group measures its financial liabilities at **fair value through profit or loss** if the financial liability is held for trading or if it is a derivative that has not been designated as a hedging instrument and is not effective as such.

— **Read more details about measurement in Note 32.** Derivatives.

Other financial liabilities, including taken out loans, are initially recognized at fair value less transaction costs. As part of subsequent measurement, other financial liabilities are measured at **amortized cost** in accordance with the effective interest method, whereby the interest costs are recognized in profit or loss corresponding with the effective interest rate.

Fair value

The fair value is the price that would be received in an orderly transaction between market participants on the measurement date for the sale of an asset or for the transfer of a liability. The measurement of financial instruments at fair value follows a three-level hierarchy and is based on the proximity of the applied measurement factors to an active market.

- **Level 1:** Financial instruments are valued according to level 1 if they have a quoted price in an active market for an identical asset or liability accessible for an entity. Quoted prices represent the fair value.
- **Level 2:** If the valuation according to level 1 is not accomplishable, level 2 valuation uses directly or indirectly observable inputs for determining the fair value.
- **Level 3:** If inputs are not observable level 3 valuation uses unobservable inputs for determining the fair value.

Valuation techniques

Class	Valuation techniques for the determination of fair values
Derivatives, investments, miscellaneous other financial assets, Schuldscheindarlehen, bonds, bank loans, and other financial liabilities, lease liabilities, and contingent considerations	The fair value is basically calculated using stock market prices. If no stock market prices are available, the valuation is carried out using customary valuation methods taking specific parameters into account. The valuation model takes the present value of the expected cash flows into account, discounted with a risk-adjusted discount rate applicable for the remaining term.
Trade accounts receivable, other receivables and assets, cash and cash equivalents, time deposits included in "Investments", trade accounts payable, and other liabilities	These classes of financial assets and liabilities are accounted for at their book value, which is a reasonable approximation of their fair value due to the fact that their residual maturity is essentially short.
Other shares	There are no prices quoted on an active market for these financial instruments. The valuation is made via valuation parameters that are not observable on the market.

a) Levels and fair values

The following tables show the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy. They do not include fair value information for financial assets and financial liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value:

As of December 31, 2019

(in TEUR)								Net book value	Fair value			
	Note	Measured at fair value			Measured at amortized costs			Total				Total
		Hedge accounting	Mandatory at FVPL	Equity instruments - fair value through OCI	At amortized costs	Other financial liabilities	No IFRS 9 valuation category		Level 1	Level 2	Level 3	
Time deposits included in "investments"	29.				236,948			236,948				
Other investments	29.		94,386	6,457				100,843	100,843			100,843
Shares in non-consolidated companies and other shares	29.			606			17,188	17,794			606	606
Derivatives	32.		40,084					40,084		40,084		40,084
Miscellaneous other financial assets	29.				7,701			7,701		7,788		7,788
Trade accounts receivable	23.				931,804			931,804				
Other receivables and assets	24.				105,982		190,636	296,618				
Schuldscheindarlehen	24./29.				80,000			80,000		80,081		80,081
Cash and cash equivalents	30.				1,200,794			1,200,794				
FINANCIAL ASSETS			134,470	7,063	2,563,229		207,824	2,912,586				
Derivatives	32.	6,253	45,527					51,780		51,780		51,780
Bank loans and other financial liabilities	34.					286,272		286,272		283,952		283,952
Lease liabilities	21./34.					260,108		260,108		266,335		266,335
Trade accounts payable						668,934		668,934				
Earn out and contingent considerations	27.		2,691			23,775		26,466		25,548		25,548
Schuldscheindarlehen	34.					1,073,209		1,073,209		1,087,586		1,087,586
Other liabilities	27.					96,385	803,561	899,946				
FINANCIAL LIABILITIES		6,253	48,218			2,408,683	803,561	3,266,715				

As of December 31, 2018

(in TEUR)		Net book value						Fair value				
		Measured at fair value			Measured at amortized costs							
				Equity instruments - fair value through OCI								
	Note	Hedge accounting	Mandatory at FVTPL		At amortized costs	Other financial liabilities	No IFRS 9 valuation category	Total	Level 1	Level 2	Level 3	Total
Time deposits included in "investments"	29.				242,683			242,683				
Other investments	29.		100,589	14,032				114,621	114,621			114,621
Shares in non-consolidated companies and other shares	29.			606			18,485	19,091			606	606
Derivatives	32.	3,302	46,432					49,734		49,734		49,734
Miscellaneous other financial assets	29.				9,539			9,539		9,683		9,683
Trade accounts receivable	23.				974,117			974,117				
Other receivables and assets	24.				120,007		167,245	287,252				
Schuldscheindarlehen	24./29.				80,000			80,000		79,885		79,885
Cash and cash equivalents	30.				858,758			858,758				
FINANCIAL ASSETS		3,302	147,021	14,638	2,285,104		185,730	2,635,795				
Derivatives	32.	1,658	51,923					53,581		53,581		53,581
Bond	34.					343,684		343,684	347,140			347,140
Bank loans and other financial liabilities	34.					140,794		140,794		139,950		139,950
Lease liabilities	21./34.					29,962		29,962		28,315		28,315
Trade accounts payable						604,189		604,189				
Earn out and contingent considerations	27.		4,798			93,814		98,612		97,904		97,904
Schuldscheindarlehen	34.					898,134		898,134		897,635		897,635
Other liabilities	27.					813,932	68,254	882,186				
FINANCIAL LIABILITIES		1,658	56,721			2,924,509	68,254	3,051,142				

b) Equity instruments at fair value through other comprehensive income

The equity instruments listed in the table below were designated as at fair value through OCI. These shares represent long-term strategic investments, which is why ANDRITZ considers this valuation category to be appropriate. The remaining shares in Chengdu Techcent Environment Co., Ltd were sold in the financial year as the investment strategy was further developed. At the time of the sale, the fair value of the portion to be sold was 7,026 TEUR. This amount was reclassified within equity. An income of 2,789 TEUR was recognized in other comprehensive income in 2019.

(in TEUR)	2019	2018
Chengdu Techcent Environment Co., Ltd	0	10,022
JVP VIII, L.P.	5,108	2,487
Others	1,955	2,129
	7,063	14,638

c) Net gains and losses

2019

(in TEUR)	Derivatives	Other financial assets measured at fair value through profit and loss	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortized costs	Financial liabilities measured at amortized costs
Interest result			1,609	19,623	-54,764
Dividends		3,003	89		
Valuation	-289	476	36	-16,907	3,234
Gains and losses from sale and disposal		-186			
Net gains/losses recognized in net income	-289	3,293	1,734	2,716	-51,530
Net gains/losses recognized in other comprehensive income	-4,868		-11,975		
NET GAINS/LOSSES	-5,157	3,293	-10,241	2,716	-51,530

2018

(in TEUR)	Derivatives	Other financial assets measured at fair value through profit and loss	Financial assets measured at fair value through other comprehensive income	Financial assets measured at amortized costs	Financial liabilities measured at amortized costs
Interest result			1,759	20,559	-40,563
Dividends		648	138		
Valuation	-26,867	2,787	93	-12,100	6,075
Gains and losses from sale and disposal		4,825			
Net gains/losses recognized in net income	-26,867	8,260	1,990	8,459	-34,488
Net gains/losses recognized in other comprehensive income	-1,458		-22,147		
NET GAINS/LOSSES	-28,325	8,260	-20,157	8,459	-34,488



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

To assess the fair value of financial instruments for which there is no active market, alternative valuation methods are used that are subject to estimation uncertainties. The parameters used in the assessment are to some extent based on future-oriented assumptions, and the selection of suitable parameters requires assumptions about their comparability.

In accordance with the disclosure requirements for financial instruments, certain assumptions are made regarding the future cash inflows and outflows of the instruments concerned.

29. Investments and other financial assets



ACCOUNTING POLICIES

Non-current investments and other financial assets consist primarily of non-current securities, Schuldscheindarlehen, shares in non-consolidated companies, and other shares.

The current investments consist mainly of government bonds, bonds of top-rated banks, money market funds, and time deposits. They are held for the purpose of investing liquid funds and are not generally intended to be retained on a long-term basis.

— [Read more details on valuation in Note 28.](#) Financial assets and liabilities.

Non-current investments and other financial assets are as follows:

(in TEUR)	2019	2018
Schuldscheindarlehen	50,000	80,000
Investment securities	33,746	31,330
Shares in non-consolidated companies	17,188	18,485
Other shares	606	606
Others	7,701	9,539
	109,241	139,960

The shares in non-consolidated companies did not include restricted right of use in 2019 or 2018, respectively. The item „Investment securities“ contains time deposits in the amount of 24,960 TEUR (2018: 14,972 TEUR).

Current investments consist of the following:

(in TEUR)	2019	2018
Time deposits	211,988	227,711
Bank bonds	50,282	27,934
Funds	36,699	60,776
Government bonds	5,076	9,553
	304,045	325,974

30. Cash and cash equivalents



ACCOUNTING POLICIES

Cash includes cash in hand and cash at banks. Cash equivalents comprise short-term investments that have original maturities of three months or less and are subject to an insignificant risk of changes in value e.g. time deposits.

— [Read more details on valuation in Note 28.](#) Financial assets and liabilities.

Cash and cash equivalents are as follows:

(in TEUR)	2019	2018
Cash in banks	785,928	618,373
Time deposits	414,866	240,385
	1,200,794	858,758

The cash and cash equivalents in the consolidated statement of financial position correspond to cash and cash equivalents in the consolidated statement of cash flows.

In various countries exchange restrictions and other legal restrictions exist. As a result, the availability of these funds of cash and cash equivalents to ANDRITZ AG as the parent company might be restricted.

31. Equity



ACCOUNTING POLICIES

Share capital

Only ordinary shares exist and all shares have been issued and have the same rights. The share capital of ANDRITZ AG amounts to 104,000 TEUR, divided into 104 million shares of no-par value.

Capital reserves

The capital reserves include additional payments from shareholders on the issue of shares.

Retained earnings

Retained earnings predominantly include retained income, fair value reserve, actuarial gains and losses, and currency translation adjustments.

Equity consists of the following:

(in TEUR)	2019	2018
Share capital	104,000	104,000
Capital reserves	36,476	36,476
Other retained earnings	1,413,451	1,445,685
Fair value reserve	-5,256	8,531
Actuarial gains/losses	-102,880	-82,140
Currency translation adjustments	-70,221	-66,326
Treasury shares	-168,983	-130,934
Total	1,206,587	1,315,292
Non-controlling interests	12,972	15,504
TOTAL SHAREHOLDERS' EQUITY	1,219,559	1,330,796

a) Fair value reserve

(in TEUR)	from hedging activities (cash flow hedge)	from financial assets measured at fair value through OCI	Total
Balance as of December 31, 2017	0	28,252	28,252
Change in accounting policies	0	171	171
Gains and losses from changes in fair values	-1,458	-22,147	-23,605
Related deferred taxes	364	3,349	3,713
Balance as of December 31, 2018	-1,094	9,625	8,531
Gains and losses from changes in fair values	-4,868	-11,975	-16,843
Related deferred taxes	1,217	1,839	3,056
Balance as of December 31, 2019	-4,745	-511	-5,256

b) Dividends

For 2019, a dividend of 0.70 EUR per outstanding share is proposed by the Executive Board.

The dividend of 156,492 TEUR for 2018, which is equal to 1.55 EUR per share, was proposed by the Executive Board and approved by the 112th Annual General Meeting on March 27, 2019. The dividend was paid to the shareholders on March 29, 2019.

c) Treasury shares

Based on an authorization given by the Annual General Meeting and with approval from the Supervisory Board, the Executive Board has decided on a share buyback and share resale program. It includes the purchase of up to 1,000,000 shares in the period from December 27, 2018 to June 30, 2019 and up to 1,000,000 shares in the period from August 2, 2019 to February 3, 2020. In 2019, 1,149,500 shares were bought back at an average price of 34.60 EUR per share. No shares were sold to authorized executives as part of the management share option plan for executives. 40,388 shares were transferred to employees of ANDRITZ as part of employee participation programs. As of December 31, 2019, the company held 4,132,610 treasury shares with a market value of 158,692 TEUR. It is planned to use these shares to service options under the management share option plan and the employee participation programs.

The following table shows the changes in the number of shares outstanding:

	Shares outstanding	Treasury shares	Total
Balance as of December 31, 2017	101,059,130	2,940,870	104,000,000
Purchase of treasury shares	-112,000	112,000	0
Used to cover share options and employee participation programs	29,372	-29,372	0
Balance as of December 31, 2018	100,976,502	3,023,498	104,000,000
Purchase of treasury shares	-1,149,500	1,149,500	0
Used to cover share options and employee participation programs	40,388	-40,388	0
Balance as of December 31, 2019	99,867,390	4,132,610	104,000,000

d) Management share option programs



ACCOUNTING POLICIES

Share Option Program 2018

The 111th Annual General Meeting on March 23, 2018 approved another share option program for managers and members of the Executive Board. The number of options granted per authorized manager can be up to 20,000, depending on the area of responsibility, and up to 37,500 for the members of the Executive Board. The options are to be drawn from the pool of shares bought back under the corporate share buy-back program. One share option entitles the holder to the purchase of one share. In order to exercise a share option, the beneficiary must have been in an active employment relationship with a company belonging to the ANDRITZ GROUP from May 1, 2018, until the date of exercise of an option. Another requirement is a personal investment in ANDRITZ shares of at least 20 TEUR for managers and at least 40 TEUR for members of the Executive Board.

The options can be exercised between May 1, 2021, and April 30, 2023 (i.e. period of exercise), provided that the average unweighted closing price of the ANDRITZ share over 20 consecutive trading days within the period from May 1, 2020 to April 30, 2021 is at least 10% above the exercise price and the EBITA margin for the 2019 business year amounting to at least 7.9% or to at least 8.0% for the 2020 business year; or the average unweighted closing price of the ANDRITZ share over 20 consecutive trading days within the period from May 1, 2021 to April 30, 2022 is at least 15% above the exercise price and the EBITA margin for the 2020 business year amounting to at least 8.0% or to at least 8.1% for the 2021 business year.

If the conditions of exercise are met, 50% of the options can be exercised immediately, 25% after three months, and the remaining 25% after a further three months. Share options can only be exercised by way of written notification to the company. The share options are not transferable. The shares purchased under the share option program are not subject to a ban on sales over a certain period.

The calculation of fair value was based on an option pricing model; applying methods scientifically recognized. The share price at the time of granting the options was the closing price of the ANDRITZ share on June 1, 2018, and amounts to 43.00 EUR. The exercise price of the option is the unweighted average closing price of ANDRITZ shares in the four calendar weeks following the 111th Annual General Meeting on March 23, 2018 and amounted to 46.01 EUR. The expected volatility and the expected dividend were calculated on the basis of historical data of ANDRITZ.

Due to the fact that the management share option programs do not include cash settlements, corresponding expenses are recorded directly in equity, according to the International Financial Reporting Standards.

926,500 options were granted in 2016. The fair value of the options at the time of granting amounted to 6,286 TEUR. Due to the non-achievement of the performance conditions for the exercise of the options the fair value of the options was entirely released to profit or loss in 2019. Hence, an effect on earnings was caused in the amount of 5,413 TEUR. Furthermore, 975,000 options were granted in 2018. The fair value of the options at the time of granting amounted to 4,475 TEUR; thereof 1,492 TEUR were recognized as proportionate expense in 2019.

Movements in options under the share option plans for the 2019 and 2018 financial years were as follows:

	2019		2018	
	Number of options	Average exercise price per option (in EUR)	Number of options	Average exercise price per option (in EUR)
Balance as of January 1	1,799,500	46.83	874,500	47.80
Options granted	0	0.00	975,000	46.01
Options exercised	0	0.00	0	0.00
Options expired and forfeited	-890,500	47.67	-50,000	47.80
Balance as of December 31	909,000	46.01	1,799,500	46.83
Exercisable at year-end	0		0	



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The share option plans are measured based on the fair value of the options on the grant date. The fair value of the options is based on parameters such as volatility, interest rate, share price, duration of the options, and expected dividends. The interpretation of market information necessary for the estimation of fair values also requires a certain degree of subjective judgment. This can result in a difference between the amounts recorded and values subsequently realized in the market.

e) Non-controlling interests



ACCOUNTING POLICIES

The share attributable to non-controlling interests is shown separately in equity of the consolidated statement of financial position, in the consolidated income statement, and in the consolidated statement of other comprehensive income. The purchase method was applied for all companies acquired. Companies purchased or sold during the year were included in the consolidated financial statements as from the date of their purchase or up to the date of their sale.

POWERLASE TECHNOLOGIES HOLDINGS LIMITED, Great Britain (including subsidiaries) was deconsolidated in the 2019 financial year. ANDRITZ acquired 100% of Xerium Technologies, Inc., USA in the 2018 financial year, taking into account that there exist non-controlling interests within the subgroup.

The summarized financial information on subsidiaries with significant non-controlling interests is as follows:

(in TEUR)	Main office	Proportion of ownership interests and voting rights held by non-controlling interests		Net income allocated to non-controlling interests		Non-controlling interests	
		2019	2018	2019	2018	2019	2018
Otorio Ltd	Tel Aviv, Israel	49.99%	49.99%	-942	-1,454	-1,062	-85
PT. ANDRITZ HYDRO	Jakarta, Indonesia	49.00%	49.00%	617	568	1,644	1,434
POWERLASE TECHNOLOGIES HOLDINGS LIMITED	West Sussex, United Kingdom	-	20.00%	-554	-1,483	-	-843
Schuler Aktiengesellschaft (Subgroup)	Göppingen, Germany	3.38%	3.38%	-4,201	71	12,338	14,974
Xerium Technologies, Inc. (Subgroup)	Youngsville / North Carolina, USA	0.00%	0.00%	29	0	52	23
Total				-5,051	-2,298	12,972	15,504

Schuler Aktiengesellschaft (Subgroup)

(in TEUR)	2019	2018
Current assets	745,298	785,495
Non-current assets	502,585	561,233
Current liabilities	-486,252	-543,223
Non-current liabilities	-295,739	-247,237
Non-controlling interests of subgroup	-45,660	2,081
Net assets	420,232	558,349
Proportion of ownership interests and voting rights held by non-controlling interests	3.38%	3.38%
Net book value of non-controlling interests	14,197	18,863
Sales	1,136,333	1,212,054
Result for the year	-132,280	13,492
Other comprehensive income	-10,046	-4,334
Total comprehensive income	-142,326	9,158
Thereof attributable to:		
Shareholders of the parent	-137,518	8,849
Non-controlling shareholders	-4,808	309
Dividends paid to non-controlling interest holders and former shareholders	0	-1,850
Cash flow from operating activities	108,379	32,983
Cash flow from investing activities	-22,751	-27,224
Cash flow from financing activities	-21,183	-42,004
Total	64,445	-36,245

f) Additional capital disclosures

ANDRITZ is committed to maintain a strong financial profile, characterized by a conservative capital structure that provides financial flexibility. As of December 31, equity and total assets amounted to the following:

(in TEUR)	2019	2018
Total shareholders' equity	1,219,559	1,330,796
Total assets	7,234,094	6,918,623
Equity ratio	16.9%	19.2%

ANDRITZ is not subject to any statutory capital requirements. The company has obligations to sell or issue shares in connection with existing share-based payment plans. In recent years, commitments from share-based payments have primarily been satisfied through buy-back of the company's shares.

The goal in capital management is on the one hand to ensure the going concern of the group entities and on the other hand to maximize the return to shareholders by optimizing the debt and equity balance. In the past corporate bonds (in 2012) and Schuldscheindarlehen (in 2017, 2018 and 2019) were issued to safeguard the financial stability and to provide the basis for further growth of the ANDRITZ GROUP. The capital structure of the Group consists of debt, cash, and equity attributable to shareholders of the parent, comprising share capital, capital reserves, and retained earnings.

The capital structure is reviewed on an ongoing basis. The cost of capital and the risks associated with each class of capital are taken into account. The Group will continue to optimize its capital structure through the payment of dividends, share buy-backs as well as the issue and redemption of debt.

The Group's overall strategy remains unchanged from 2018.

32. Derivatives



ACCOUNTING POLICIES

The Group uses derivatives to hedge interest rate and foreign currency risks and to hedge the price risk of commodities arising from operational, financing, and investment activities. Financial liabilities to obtain profits from short-term fluctuations in the market price or from the trader's margin are not held.

Accounting for derivatives

If the criteria for hedge accounting in accordance with IAS 39 – Hedge Accounting are not met, derivatives are measured at fair value on the trading day. As of the balance sheet date, the fair value of open derivative contracts is calculated as the present value of future cash flows using currency, interest rate, and raw material price quotations. The own credit risk as well as the credit risk of the contractual partner are included. Any gain or loss resulting from the valuation is recognized in the income statement.

Depending on the fair value, the derivatives are recognized as other receivables or other liabilities. The instruments are classified as non-current if the remaining terms exceed 12 months and current if the remaining terms are 12 months or less.

Hedge Accounting

Derivatives designated as a hedging instrument because they meet the requirements for hedge accounting are accounted for in accordance with IAS 39. ANDRITZ has exercised the option of not applying the new requirements of IFRS 9.

In connection with the hedging of the fair value of a recognized asset or a recognized liability ("**fair value hedge**"), the change in the fair value of the hedging instrument and the hedged item are recognized in the income statement.

In connection with the hedging of future cash flows ("**cash flow hedge**") of a recognized receivable or payable or a highly probable future transaction, the effective portion of the change in fair value is shown in other comprehensive income and the ineffective portion is immediately shown in the income statement. The amounts accrued in other comprehensive income are transferred to the income statement in the period in which the hedged obligation or expected transaction affects the income statement.

At inception of the hedge, the Group documents the relationship between the hedged item and the hedging instrument, including the risk management objectives and the underlying corporate strategy. In addition, both when the hedge is entered into and during its progression, it is regularly documented and demonstrated that the hedging instrument is highly effective in terms of the hedged risk.

The following overview shows the nominal values and fair values by type of forward contract:

2019

(in TEUR)	Remaining terms nominal values			Fair value		
	not exceeding 1 year	more than 1 year	Total	positive	negative	Total
Forward contracts - Foreign exchange	2,545,516	180,322	2,725,838	40,084	45,527	-5,443
Forward contracts - Interest rate	0	192,500	192,500	0	6,253	-6,253
Total	2,545,516	372,822	2,918,338	40,084	51,780	-11,696

2018

(in TEUR)	Remaining terms nominal values			Fair value		
	not exceeding 1 year	more than 1 year	Total	positive	negative	Total
Forward contracts - Foreign exchange	2,238,084	327,682	2,565,766	46,432	51,923	-5,491
Forward contracts - Interest rate	350,000	182,500	532,500	3,302	1,658	1,644
Total	2,588,084	510,182	3,098,266	49,734	53,581	-3,847

The fair values of the foreign exchange forward contracts classified according to transaction currency are as follows:

(in TEUR)	not exceeding 1 year	more than 1 year	Total 2019	Total 2018
US dollar	52	-107	-55	-6,029
Euro	-2,387	-1,544	-3,931	2,212
Canadian dollar	-254	-44	-298	1,952
Brazilian real	-72	0	-72	-3,484
Chinese renminbi yuan	-178	-81	-259	-13
Other currencies	-604	-224	-828	-129
	-3,443	-2,000	-5,443	-5,491

a) Fair value hedges

The Group used interest rate swaps (Forward contract – interest rate) to hedge the change in fair value of the issued corporate bond due to interest rate changes. ANDRITZ has designated the issued bonds and the related interest rate swaps as fair value hedge. Since the hedge was considered to be effective, the net book value of the bond is adjusted for changes in the fair value attributable to the hedged risk. The bond was redeemed in 2019 and the interest rate swap was realized. There are no other fair value hedge relationships.

The portfolio of the corporate bond (hedged item) changed as follows:

(in TEUR)	2019	2018
Balance as of January 1	343,684	349,759
Gains (-)/losses (+) recognized through profit or loss	-3,234	-6,075
Repurchase of own corporate bonds	0	0
Redemptions	-340,450	0
Balance as of December 31	0	343,684

The market values of interest rate swaps (the hedging instrument) changed as follows:

(in TEUR)	2019	2018
Fair value of swaps as of January 1	3,302	9,518
Fair value of swaps as of December 31	0	3,302
Gains/losses recognized through profit or loss	-3,302	-6,216

The following table shows the changes in fair value from hedged items and hedging instruments recognized through profit or loss:

(in TEUR)	2019	2018
From hedged items	3,234	6,075
From hedging instruments	-3,302	-6,216
Gains/losses recognized through profit or loss	-68	-141

b) Cash flow hedges

In the 2017 to 2019 financial years, Schuldscheindarlehen were issued in ten tranches with a total nominal value of 1,075,000 TEUR. The tranches were concluded with terms of five to ten years and have variable or fixed interest rates. To hedge the interest rate risk of future cash flows, four interest rate swaps (Forward contract – interest rate) were concluded. The future cash flows expected from the floating-rate nominal amount of 190,500 TEUR were defined as the underlying. Combined with the related interest rate swaps it was designated as a cash flow hedge relationship. The hedged item is included in the balance sheet item “Schuldscheindarlehen” and the hedging instrument in the item “other receivables” or “other payables”. The hedging relationship will result in cash flows of 12,688 TEUR over the next five years and 3,269 TEUR from 2025 onwards. The effectiveness of the hedging relationship is determined using the cumulative dollar offset method based on forward rates. The entire change in value was used to determine the ineffectiveness of the hedge. The ineffective portion of the hedging relationship in the financial year was 0 TEUR (2018: 0 TEUR). Therefore, all changes in value that represented the effective portions of the hedging relationships were recognized in equity in the fair value reserve.

The effects are shown in the consolidated statement of comprehensive income in the result from cash flow hedges and have developed as follows:

(in TEUR)	2019	2018
Balance as of January 1	-1,094	0
Gains and losses from changes in fair values	-4,868	-1,458
Related deferred taxes	1,217	364
Balance as of December 31	-4,745	-1,094

c) Offsetting

The Group concludes derivatives in accordance with the Global Netting Agreements (Framework Agreement) of the International Swaps and Derivative Association (ISDA) and similar agreements. These agreements do not meet the criteria for netting in the balance sheet. This is because at present the Group has no legal entitlement to offset the amounts recognized. In the case of a termination of the framework agreement or an early termination of the outstanding contracts, the net amounts of the market values of all contracts to be terminated would be compensated. The following table sets out the book values of the financial instruments that are subject to the arrangements described:

(in TEUR)	2019		2018	
	positive	negative	positive	negative
Gross and net amounts (in the statement of financial position)	40,084	-51,780	49,734	-53,581
Netting (potential effects)	-1,056	1,056	-2,225	2,225
NET AMOUNTS	39,028	-50,724	47,509	-51,356



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

Assumptions are made about the fair values of derivatives, in particular derivatives in foreign currencies, as of the balance sheet date, which essentially reflect the future cash inflows or outflows from such instruments.

33. Risk management – Risks relating to financial instruments

As a global company serving a variety of different markets and customers, the Group is subject to risks relating to financial instruments as well as strategic and operational risks. ANDRITZ has implemented an established Group-wide control and risk management system with the main task of identifying emerging risks at an early stage and quickly taking countermeasures. This system is an important element in the active risk management system within the Group. Despite having this control and risk management system in place, it cannot be guaranteed that all risks will be identified at an early stage. Consequently, assets, liabilities, financial position, and profit or loss of the Group could be adversely affected. In order to minimize the financial risks at the best possible rate and to enhance monitoring, control, and assessment of its financial and liquidity position, the ANDRITZ GROUP has implemented comprehensive policies and a transparent information system. The individual risks relating to financial instruments are described below.

a) Credit risks



ACCOUNTING POLICIES

The impairment model applies to the following assets:

- Financial assets valued at amortized cost
- Debt instruments valued at FVTOCI
- Contract assets

The impairment model of "expected credit losses" (ECL) is applied. This model requires significant judgment to what extend the expected credit losses are affected by changes in economic factors. This assessment is determined on the basis of weighted probabilities. One of the following principals serves as a basis:

- 12-month credit losses: These are the expected credit losses due to possible defaults within 12 months after balance sheet date.
- Lifetime credit losses: These are expected credit losses due to all possible defaults during the expected lifetime of a financial instrument.

General approach

If an asset does not yet show an impairment loss at the time of acquisition, it is assessed on the basis of the concept of 12-month credit loss at initial recognition. In principal, this assessment is retained for the following balance sheet dates. If the credit risk of a financial asset has increased significantly on the balance sheet date since initial recognition, the valuation is based on the concept of lifetime credit loss. When determining if the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers appropriate and supportable information that is relevant and available without disproportional effort. This includes both quantitative and qualitative information and analysis, based on the historical experience of the Group and forward looking information as well as a substantiated credit rating.

The Group assumes that the credit risk of a financial asset has **increased significantly** if

- the financial asset is more than 30 days past due, unless there are reasonable causes or
- an instrument needs to be renegotiated and stricter requirements (e.g. increase in collateral, etc.) are applied or
- there is a significant change in credit spreads, credit default swap rates for borrowers, etc. for a given or similar instrument.

At each balance sheet date, the Group assesses whether the respective assets are **credit-impaired**. This is the case when one or more events that adversely affect estimated future cash flows have occurred. A corresponding impairment reduces the gross book value of the assets. The following indicators are used in order to be able to judge, after reasonable assessment, that a significant change in credit risk has occurred and that it cannot be realized:

- The borrower is unlikely to fully offset his credit commitments to the Group without the Group taking any action such as the realization of collateral (if any) or
- the financial asset is more than 90 days overdue, unless there are reasonable causes or

- the rating no longer meets the notation "investment grade". The Group defines this as Baa3 respectively BBB- or higher (Cash and cash equivalents and time deposits included in "Investments" deposited at banks; or financial institutions are generally rated from Aaa to B1 by the rating agency Moody's and from AA+ to BB+ by Standard & Poor's and Fitch).

Simplified approach

For **trade receivables** and **contract assets** that do not have a material financing component, the lifetime credit losses concept always applies. ANDRITZ has also decided to apply this method to contract assets with a material financing component and other receivables. In addition to considering single valuation allowances, the estimated expected credit losses are calculated on the basis of experience of actual credit losses over the past five years. Credit risk within the Group is segmented by common default risk characteristics such as credit risk assessment. Actual credit losses are adjusted using scaling factors to reflect the differences between the economic conditions at the time the historical data was collected, the current conditions as well as the Group's view of economic conditions over the expected life of the receivables. The scaling factor is based on the gross domestic product (GDP) and the unemployment rate forecasts as well as the industry outlook, and is around 2%.

When recognizing the impairments, special disclosure requirements must be considered. There is a differentiation depending on the type of financial instrument and the level of the impairment model to which a financial instrument is assigned:

- Impairment losses on financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.
- If, for instance, there are objective indications of impairment at the time of acquisition, the expected credit loss is priced into the interest rate. At the time of acquisition, a separate disclosure of the valuation allowance is not necessary. For changes after initial recognition, a separate valuation allowance is required.

Risk minimization strategies

The risk of a possible default (insolvency) by individual or several counterparties is minimized by means of an internal counterparty limit system. In this system, the maximum investment limit for each individual counterparty is determined in view of the respective counterparty's credit rating (by international rating agencies such as Moody's, Standard & Poor's, Fitch) and the credit default swap spreads (CDS spreads – indicator of the probability of the counterparty defaulting). The counterparty limit is adjusted on a monthly basis so that it is possible to react quickly in the event of credit rating changes at short notice. If there are larger, short-term changes in CDS spreads or counterparty ratings, the counterparty exposure is reduced immediately.

Credit risks and the risk of a delay in payment by counterparties are controlled by the use of credit approvals, credit limits, and monitoring procedures. If appropriate, the Group obtains guarantees from governmental export agencies or similar private institutions to reduce the risk of a counterpart defaulting.

Without considering risk minimization strategies as described above, the carrying values of financial assets recorded in the financial statements represent the Group's maximum exposure to credit risk.

Valuation allowances are included for all known risks. The possibility of a future shortfall in payment exceeding the recorded valuation allowance cannot be avoided with certainty.

(in TEUR)	Trade accounts receivable	Contract assets	Other receivables and assets	Cash and cash equivalents	Investments	Total
Balance as of December 31, 2017	-43,385	0	-4,001	0	0	-47,386
Change in accounting policies	-5,834	-2,132	-1,538	-166	-1,028	-10,698
Charged to expenses	-7,101	-2,162	-7,324	-50	-10	-16,647
Usage	3,141	0	96	0	0	3,237
Release	190	0	2,279	0	499	2,968
Currency translation adjustments	-5,275	-13	24	0	0	-5,264
Balance as of December 31, 2018	-58,264	-4,307	-10,464	-216	-539	-73,790
Charged to expenses	-5,833	0	-598	-21	-12	-6,464
Usage	1,980	0	471	0	0	2,451
Release	0	617	1,590	0	179	2,386
Currency translation adjustments	43	11	-8	0	0	46
Balance as of December 31, 2019	-62,074	-3,679	-9,009	-237	-372	-75,371

Already in the bidding phase, customer credit assessments are carried out and corresponding credit limits are set. In order to minimize the risk related to bad debts, collateral is agreed with customers and the risk of default is largely covered by public or private insurances, respectively. The Group does not have any significant credit risk exposure to any single counterparty or any group of counterparties having similar characteristics. The Group defines counterparties as ones with similar characteristics if they are related entities. There are no sales from transactions with a single external customer that amount to 10% or more of the Group's sales. On an overall basis, there is no significant concentration of credit risk.

To ensure transparency with respect to financial risks on projects and to enable immediate countermeasures a quarterly credit risk reporting to the Executive Board has been implemented. The reporting shows the maximum expected unsecured credit risk for orders with a value of over one million euros as well as customer ratings.

Changes in gross book values that contribute to changes in impairment are mainly due to the project portfolio and regional distributions. For assets that were assessed according to the concept of 12-month credit losses at inception, there was no significant increase in default risk since initial recognition. Therefore, there was no change to the valuation to the concept of lifetime credit losses.

The following tables show the gross book values and value adjustments of the assets included in the impairment model of IFRS 9, separated by risk category. The risk classes are based on the method of determining the valuation allowance.

Trade accounts receivable

In order to control the credit risks from trade receivables outstanding effectively, the ANDRITZ GROUP has established a uniform risk management process and compiled an appropriate Group-wide policy. In the ANDRITZ subsidiaries, the respective credit risk managers are responsible for conducting regular credit rating analyses on customers and project risk analyses, including the valuation of collateral securities. In particular, collateral securities include credit insurance, advance payments, letters of credit, and guarantees.

In addition to single valuation allowances, the estimated expected credit losses are calculated on the basis of experience with actual credit defaults over the last five years and the inclusion of a scaling factor separated into days overdue and risk classes.

2019

(in TEUR)	Average weighted loss rate - risk category 1	Average weighted loss rate - risk category 2	Gross amount	Impairment loss	Net amount
Not due	0.03%	0.34%	645,615	-1,062	644,553
Up to 60 days past due	0.23%	1.24%	157,051	-1,064	155,987
61 to 120 days past due	0.69%	3.73%	44,526	-875	43,651
More than 120 days past due	1.81%	9.95%	89,764	-5,475	84,289
Individually impaired			56,922	-53,598	3,324
Total			993,878	-62,074	931,804

2018

(in TEUR)	Average weighted loss rate - risk category 1	Average weighted loss rate - risk category 2	Gross amount	Impairment loss	Net amount
Not due	0.04%	0.41%	657,216	-1,458	655,758
Up to 60 days past due	0.23%	1.04%	176,490	-897	175,593
61 to 120 days past due	0.69%	3.13%	46,422	-874	45,548
More than 120 days past due	1.84%	8.35%	95,538	-3,918	91,620
Individually impaired			56,715	-51,117	5,598
Total			1,032,381	-58,264	974,117

Contract assets

Based on internal credit risk reporting, contract assets are valued differently, depending on whether there is collateral or not.

2019

(in TEUR)	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Individually impaired	-	2,026	-1,434	592
Unsecured proportion	0.43%	71,071	-269	70,802
Secured proportion	0.31%	664,728	-1,976	662,752
Total		737,825	-3,679	734,146

2018

(in TEUR)	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Individually impaired	-	2,038	-1,437	601
Unsecured proportion	0.86%	67,878	-582	67,296
Secured proportion	0.32%	720,745	-2,288	718,457
Total		790,661	-4,307	786,354

Other receivables

In addition to single valuation allowances, the estimated expected credit losses are calculated on the basis of experience with actual credit defaults over the last five years and the inclusion of a scaling factor.

2019

(in TEUR)	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Individually impaired	-	26,268	-8,227	18,041
Lump sum impaired	0.92%	88,723	-782	87,941
Total		114,991	-9,009	105,982

2018

(in TEUR)	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Individually impaired	-	29,394	-9,429	19,965
Lump sum impaired	1.12%	101,077	-1,035	100,042
Total		130,471	-10,464	120,007

Cash and cash equivalents and investments

ANDRITZ pursues a risk-averse investment strategy. Cash is largely invested in low-risk financial assets, such as government bonds, government-guaranteed bonds, money market funds, investment funds to cover pension obligations, Schuldscheindarlehen insured by a certificate of deposit or time deposits. However, turbulences on the international financial markets may lead to unfavorable price developments for various securities or make them non-tradable. This could have an adverse effect on the ANDRITZ GROUP's financial result or shareholders' equity due to necessary impairment or valuation allowances. On a monthly basis the Executive Board is informed about the extent and volume of current risk exposure and the respective counterparty limits in the ANDRITZ GROUP.

Credit risk related to cash and cash equivalents and time deposits included in "Investments" is low, since a conservative investment strategy determines a preferably wide diversification with minimum criteria for the counterparty's credit rating of the investment. Bank balances and time deposits are assessed based on ratings.

2019

(in TEUR)	External rating	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Low risk	AAA to BBB-	0.03%	1,328,459	-383	1,328,076
Medium risk	BB+ to BB-	0.21%	107,611	-221	107,390
High risk	B+ to D	0.23%	2,281	-5	2,276
Total			1,438,351	-609	1,437,742

2018

(in TEUR)	External rating	Average weighted loss rate	Gross amount	Impairment loss	Net amount
Low risk	AAA to BBB-	0.05%	971,981	-514	971,467
Medium risk	BB+ to BB-	0.16%	125,263	-230	125,033
High risk	B+ to D	0.22%	4,952	-11	4,941
Total			1,102,196	-755	1,101,441



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

The valuation allowance based on the model of "expected credit losses" comprises to a considerable extent assessments and judgments that are based on the creditworthiness of individual groups, the current economic developments, the analysis of historical bad debts and future-oriented forecasts. The parameters used in the model are updated regularly.

The value adjustment of individual dubious claims also includes the assessment of the creditworthiness of the respective customer.

When assessing whether a transition from the 12-month credit losses to the lifetime credit losses is to be used in individual cases, considerable judgment is required of the management and existing customer and market information is taken into account.

b) Liquidity risks

In order to minimize the financial risks at the best possible rate and to enhance monitoring, control, and assessment of its financial and liquidity position, the ANDRITZ GROUP has implemented comprehensive policies and a transparent information system. The Group manages liquidity risks especially by holding adequate financial reserves, by issuing Schuldscheindarlehen, by requiring customer advances, and by reconciling maturity date profiles of financial assets, receivables, and liabilities. A rolling liquidity forecast based on a fixed planning horizon, the quarterly update of this forecast as well as existing and unused credit lines are intended to ensure the necessary liquidity supply for the ANDRITZ GROUP.

The Group's risk management policy is to hedge 75 to 85% of its estimated foreign currency exposure in respect of forecast sales and purchases over the following 12 months at any point in time. The Group uses forward exchange contracts to hedge its currency risk, most with a maturity of less than one year from the reporting date.

The Group endeavors to mitigate the risk of payment failure by customers at the best possible rate by means of bank guarantees and export insurance. Further information can be found in chapter 33. a) Credit risks. However, it cannot be excluded that there will not be any individual payment default that will have a substantial negative impact on development of earnings and liquidity of the Group in the event of occurrence.

The ANDRITZ GROUP's position in terms of liquidity is very good and it has high liquidity reserves. The Group avoids dependence on a single bank or a few banks. In order to ensure independence, only a certain volume of each major financial product (cash and cash equivalents, financial liabilities, securities, guarantees, and derivatives) is handled by only one bank at a time. In the ANDRITZ GROUP, liquidity not only means the ability to meet financial obligations in the narrower sense, but also the availability of sureties. Operative business requires that bid bonds, contract performance guarantees, downpayment guarantees as well as performance and warranty bonds are provided on a continuous basis. As a result, financial flexibility is also determined by sufficient surety lines. With this diversification, ANDRITZ is seeking to minimize the counterparty risk at the best possible rate.

There are no substantial credit delays by the ANDRITZ GROUP; in general all financial liabilities are settled on due date. The following tables show the undiscounted future contractual cash flows from financial liabilities:

2019

(in TEUR)	Net book value	Contractual cash flows			
		Not exceeding 1 year	1 to 5 years	More than 5 years	Total
Bank loans and other financial liabilities	286,272	136,095	87,856	71,235	295,186
Lease liabilities	260,108	51,035	141,159	89,758	281,952
Trade accounts payable	668,934	668,934	0	0	668,934
Earn out and contingent considerations	26,466	2,691	23,775	0	26,466
Schuldscheindarlehen	1,073,209	14,925	548,791	596,303	1,160,019
Other liabilities	899,946	893,188	6,696	62	899,946
Non-derivative financial liabilities	3,214,935	1,766,868	808,277	757,358	3,332,503
Derivatives	51,780	39,677	12,103	0	51,780
Derivative financial liabilities	51,780	39,677	12,103	0	51,780
TOTAL	3,266,715	1,806,545	820,380	757,358	3,384,283

2018

(in TEUR)	Net book value	Contractual cash flows			
		Not exceeding 1 year	1 to 5 years	More than 5 years	Total
Bonds	343,684	363,563	0	0	363,563
Bank loans and other financial liabilities	140,794	122,441	17,275	1,313	141,029
Lease liabilities	29,962	6,109	17,833	11,969	35,911
Trade accounts payable	604,189	604,189	0	0	604,189
Earn out and contingent considerations	98,612	74,837	23,775	0	98,612
Schuldscheindarlehen	898,134	13,318	160,753	814,502	988,573
Other liabilities	882,186	860,951	16,607	4,628	882,186
Non-derivative financial liabilities	2,997,561	2,045,408	236,243	832,412	3,114,063
Derivatives	53,581	43,607	9,974	0	53,581
Derivative financial liabilities	53,581	43,607	9,974	0	53,581
TOTAL	3,051,142	2,089,015	246,217	832,412	3,167,644

c) Market risks

The major market risks of the ANDRITZ GROUP contain exchange rate risks, interest rate risks, and raw material price risks.

Exchange rate risks

The currency risks of the Group occur due to the fact that the Group operates worldwide in different countries that do not have Euro as their local currency. The Group enters into foreign exchange forward contracts and swaps in order to exclude or minimize the foreign exchange risk (hedging) resulting from orders that are concluded in foreign currency. Exchange rate risks resulting from the recognition of equity are not hedged. Foreign exchange forward contracts are concluded exclusively with first-class national or international banks whose credit rating is checked continuously by Group Treasury in order to avoid a "cluster risk". The measures and regulations needed in connection with hedging of orders not concluded in the respective functional currencies of the Group companies are stated in the Group-wide treasury policy.

The sensitivity analysis provides an approximate quantification of the risk exposure in the event that certain specified parameters were to be changed under a specific set of assumptions. Exchange rate risks occur particularly with the US dollar (USD), Chinese renminbi yuan (CNY), Swiss franc (CHF), and Canadian dollar (CAD). The following details describe the sensitivity to a rise or fall in the above noted currencies against the Euro (EUR) from the Group's point of view. The change shows the amount applied in internal reporting of foreign currency risk and reflects the Group's assessment of a possible change in foreign exchange rates. Currency risks in the meaning of IFRS 7 arise from financial instruments that are denominated in a currency other than the functional currency and are of a monetary nature. Translation differences from converting the financial statements of foreign Group companies into the Group currency are disregarded. The sensitivity analysis includes the material financial instruments of the ANDRITZ GROUP outstanding on the balance sheet date.

The impact on net income is as follows:

(in TEUR)		2019	2018
EUR/USD	+10%	-26,003	-23,297
	-10%	26,003	23,297
EUR/CNY	+10%	16,349	7,121
	-10%	-16,349	-7,121
EUR/CHF	+10%	4,721	4,404
	-10%	-4,721	-4,404
EUR/CAD	+10%	-3,784	-3,963
	-10%	3,784	3,963

The changes compared to the net income reported are mainly due to the market valuation of foreign exchange forward contracts at new rates, which are used to hedge plan items and are not included in any hedge relationship according to IAS 39. These changes in fair values of derivatives are offset by the hedged order backlog.

Interest rate risks

The ANDRITZ GROUP estimates that the exposure to interest rate risk of financial assets and liabilities is low due to the risk-averse strategy; besides the hedging instruments mentioned in chapter 32. a) and 32. b) no additional significant derivatives for hedging of interest risks are used. The interest rate risks are managed by internal Cash-flow-at-Risk (CfaR) and Value-at-Risk (VaR) calculations as well as by prespecified limits. The limits for CfaR and VaR are set by using a benchmarking approach. Observation of the defined limits is monitored on a quarterly basis.

The weighted average interest rates, referred to the remaining terms of the respective financial asset or financial liability, were as follows at the balance sheet date:

2019

(in %)	EUR	USD	BRL	CNY
FINANCIAL ASSETS				
Cash on current accounts	0.0	0.8	0.0	1.8
Current deposits	0.1	0.0	5.5	1.9
Investments - current	0.1	0.0	0.0	2.4
Investments - non-current	0.4	0.0	0.0	0.0
FINANCIAL LIABILITIES				
Lease liabilities	1.9	1.7	7.5	3.2
Current loans	0.1	0.0	6.6	5.8
Non-current loans	1.3	0.0	0.0	0.0
Schuldscheindarlehen - non-current	1.4	0.0	0.0	0.0

2018

(in %)	EUR	USD	BRL	CNY
FINANCIAL ASSETS				
Cash on current accounts	0.0	0.9	1.6	0.7
Current deposits	0.1	0.0	6.3	2.3
Investments - current	0.6	0.0	0.0	2.7
Investments - non-current	0.3	0.0	0.0	0.0
FINANCIAL LIABILITIES				
Overdrafts on current accounts	0.0	0.7	0.0	0.0
Current loans	0.3	4.0	5.1	6.6
Non-current loans	1.7	0.0	0.0	5.7
Bonds, current	2.0	0.0	0.0	0.0
Schuldscheindarlehen - non-current	1.5	0.0	0.0	0.0

Sensitivity

Interest rate sensitivity is assumed at 100 basis points in internal reporting on the interest rate risk. This reflects the Group's estimate with respect to a possible change in the interest rate.

A rise in the interest level by 100 basis points, while simultaneously keeping all other variables constant, would have led to a decrease in the interest result of 310 TEUR in the 2019 financial year (2018: increase of 4,922 TEUR). A decline in the interest level would have led to an increase in the interest result in the same amount.

Raw material price risks

Raw materials are exposed to price fluctuation risks due to the volatility of the raw material markets. The Group uses commodity forwards mainly to hedge the price risk for copper, which is used in manufacturing of generators. Contracts are concluded exclusively with first-class banks whose credit rating is checked continuously by Group Treasury.

G) OTHER INFORMATION

34. Consolidated statement of cash flows



ACCOUNTING POLICIES

In the consolidated statement of cash flows, cash flows are separated into cash inflows and outflows from operating activities, investing activities, and financing activities, irrespective of how the items are classified in the consolidated statement of financial position.

Cash flow from operating activities is derived indirectly based on the Earnings Before Taxes, which is adjusted for non-cash expenses (primarily depreciation and amortization) and income. Cash flow from operating activities is calculated considering the changes in net working capital.

The implementation of IFRS 16 results in an improvement in cash flows from operating activities, as the lease payments are not recorded exclusively in cash flows from operating activities anymore, but the repayment portion contained in the lease payments is to be recorded in the cash flow from financing activities.

Investing activities mainly comprise payments for intangible assets and property, plant, and equipment as well as payments received and payments made for non-current and current financial assets and payments for the acquisition of subsidiaries. The payments made for intangible assets as well as property, plant, and equipment include capital expenditures (additions to intangible assets and property, plant, and equipment) for the fiscal year to the extent that they already had an effect on cash.

Financing activities include not only dividend payments, but also cash flows from the redemption or issue of bonds and Schuldscheindarlehen as well as other debts and payments made for buy-back of treasury shares and own corporate bonds.

Non-cash transactions encompass mainly the capitalization of right of use assets as property, plant, and equipment by means of a lease or the acquisition of intangible assets or property, plant, and equipment by assuming directly related liabilities (sale on credit).

The changes of the items in the consolidated statement of financial position shown in the consolidated statement of cash flows cannot be derived directly as effects of currency conversion, companies not fully consolidated in prior periods or no longer consolidated in the current period as well as assets classified as held for sale do not result in cash flows.

a) Cash flow from operating activities

The cash flow from operating activities, at 821,577 TEUR, was significantly above the previous year's reference figure (2018: 7,754 TEUR). The change is due to the increase in gross cash flow (587,231 TEUR in 2019 versus 404,828 TEUR in 2018) as well as project related changes in net working capital (330,689 TEUR in 2019 versus -278,741 TEUR in 2018). Increased depreciation and amortization (due to the acquisition of Xerium Technologies, Inc. and the implementation of the new leasing standard) as well as measures for capacity adjustments not yet cash-effective were the main reasons for the increase in gross cash flow. Net working capital increased significantly as a result of advance and progress payments for large projects.

b) Cash flow from investing activities

The cash flow from investing activities amounted to -107,892 TEUR (2018: -89,836 TEUR). The change compared to the previous year is mainly due to different amounts for payments received and payments made for financial assets as well as a significantly lower investment volume for company acquisitions.

The net cash flows from company acquisitions are as follows:

(in TEUR)	2019	2018
Net assets	7,690	79,464
Non-controlling interests	0	-32
Goodwill	0	251,470
CONSIDERATION TRANSFERRED	7,690	330,903
Cash and cash equivalents acquired	-599	-32,574
Payables from purchase price not yet paid (incl. contingent consideration)	0	-28,345
Fair value of formerly held interests	0	0
NET CASH FLOW FROM COMPANY ACQUISITIONS	7,091	269,983

The payables from purchase price not yet paid (incl. contingent consideration) mainly comprise of the acquisition of Diatec in 2018. The cash flows from company acquisitions are valued at the rates applying to the respective transactions.

— [Read more in Note 5. Acquisitions](#)

c) Cash flow from financing activities

The cash flow from financing activities amounted to -365,507 TEUR (2018: -112,227 TEUR). The change mainly resulted from redemption of a corporate bond of ANDRITZ AG (-350,000 TEUR in 2019 versus -427,586 TEUR because of the early redemption of a corporate bond held by Xerium Technologies, Inc. in the financial year 2018). This is offset by payments received from bank loans and other financial liabilities (172,581 TEUR in 2019 versus 57,794 TEUR in 2018) as well as payments received from issuance of Schuldscheindarlehen (175,000 TEUR in 2019 versus 500,000 TEUR in 2018). Between 2017 and 2019, ANDRITZ AG issued Schuldscheindarlehen in several tranches for corporate refinancing including financing of acquisitions.

The increase in payments made for bank loans and other financial liabilities is due to the implementation of the new leasing standard and includes the repayment portion contained in the lease payments. ANDRITZ exercised the option in accordance with IAS 7.33 and reported the interest paid and received in the cash flow from operating activities.

In addition, payments were made to former shareholders (-79,761 TEUR versus -411 TEUR), mainly for contingent consideration paid for the Chinese press and machine tool manufacturer Yangzhou Metal Forming Machine Tool Co., Ltd. (Yadon).

In 2019, own shares of 39,776 TEUR were bought back (versus 4,922 TEUR in 2018).

The carrying amounts of the financial liabilities shown in the cash flow from financing activities, broken down by cash and non-cash changes, developed as follows in the reporting year:

(in TEUR)	Bond	Lease liabilities	Schuldschein- darlehen	Bank loans and other financial liabilities	Total
Balance as of December 31, 2017	349,759	18,334	399,070	106,671	873,834
Payments received	0	0	500,000	57,794	557,794
Payments made	-427,586	-3,021	0	-75,051	-505,658
Other non-cash changes	-6,075	115	-936	-166	-7,062
Currency translation adjustments	-8,627	-41	0	-3,869	-12,537
Changes in consolidation scope	436,213	14,575	0	55,415	506,203
Balance as of December 31, 2018	343,684	29,962	898,134	140,794	1,412,574
Change in accounting policies	0	244,513	0	0	244,513
Payments received	0	0	175,000	172,581	347,581
Payments made	-350,000	-51,524	0	-29,378	-430,902
Other non-cash changes	6,316	35,589	75	-120	41,860
Currency translation adjustments	0	2,301	0	-579	1,722
Changes in consolidation scope	0	-733	0	2,974	2,241
Balance as of December 31, 2019	0	260,108	1,073,209	286,272	1,619,589

35. Assets held for sale



ACCOUNTING POLICIES

The requirements of IFRS 5 for classification as held for sale are met if assets can be sold in their current condition, the sale of which is highly probable and the sale is expected to be completed within one year of the reclassification. The assets that are shown as held for sale contain individual assets and directly associated liabilities. Assets held for sale are recognized at their fair value less costs to sell, if this amount is lower than the book value. An assessment takes place immediately before the initial classification as held for sale. Any resulting impairment losses are recognized in the income statement.

The following assets and directly associated liabilities are reported as held for sale:

(in TEUR)	2019	2018
Property, plant, and equipment	7,794	1,702
Inventories	3,200	0
Other receivables and assets	244	0
ASSETS HELD FOR SALE	11,238	1,702
Provisions	4,184	0
Other liabilities	792	0
LIABILITIES RELATING TO ASSETS HELD FOR SALE	4,976	0

In the Hydro business area, the sale of property, plant, and equipment in Araraquara, Brazil, was initiated in 2019. The sale is expected to be closed in the second half of 2020. Assets in the amount of 5,762 TEUR were recognized as held for sale; the preceding valuation resulted in a write-off of 920 TEUR.

The Metals business area contains various assets and directly associated liabilities in Göppingen, Germany, which were classified as held for sale. The sale was initiated in 2019 and is expected to be closed in the first half of 2020. Assets amounting to 4,976 TEUR and debts amounting to 4,976 TEUR were recognized as held for sale. The preceding valuation resulted in a write-off of 567 TEUR.

In the Pulp & Paper business area, the sale of two production sites in Middletown/Virginia, USA, and Warwick/Québec, Canada, was initiated in 2018. The final execution of the purchase agreement (Closing) of the production site in Middletown/Virginia, USA, was in December 2019. There was no material gain or loss on the sale. The sale of the production facility in Warwick/Québec, Canada, has been delayed due to circumstances that were previously classified as unlikely. The plan to sell the production facility is being pursued and required measures with consideration of the changed circumstances have been taken. The corresponding property, plant, and equipment in the amount of 500 TEUR are still classified as held for sale.



SOURCES OF ESTIMATION UNCERTAINTY AND CRITICAL JUDGMENTS

Provisions are recognized and measured based on estimates of the extent and probability of future events as well as estimates of the discount rate. As far as possible, these are based on past experience.

36. Contingent assets and liabilities



ACCOUNTING POLICIES

A contingent asset is not recognized in the financial statements, but is disclosed if an inflow of economic benefit is probable. Contingent liabilities are not recognized in the financial statements. They are only disclosed if the possibility of an outflow of resources embodying economic benefit is probable.

In the course of its business, the ANDRITZ GROUP is party to numerous legal proceedings before both administrative and judicial courts and bodies as well as before arbitration tribunals. The substantial majority of such proceedings is typical for the Group's industry, including contract and project disputes, product liability claims, and intellectual property litigation. The ANDRITZ GROUP records adequate provisions to cover the expected outcome of proceedings to the extent that negative outcomes are likely and reliable estimates can be made. There is no guarantee that these provisions will be sufficient. Given the amounts involved in some of these legal disputes, a negative decision for ANDRITZ in one or several of these disputes may have a material adverse effect on the earnings and liquidity position of the Group. In cases, where a negative outcome is unlikely, though seems possible (and is not totally remote), the ANDRITZ GROUP does not record provisions.

Such material cases for contingent liabilities are as follows:

The subject area product liability includes a number of cases alleging injuries and/or death resulting from exposure to asbestos. As of December 31, 2019 certain subsidiaries of the ANDRITZ GROUP are defendants in asbestos cases in the USA. All cases relate to claims against multiple defendants. All subsidiaries intend to defend each claim vigorously.

ANDRITZ HYDRO S.A., Brazil, faces tax claims based on allegations of joint and several liability with the Inepar Group arising out of the previous minority holding of Inepar. The tax claim enforcement actions, which were also contested, are not active as a result of Inepar's participation in the governmental tax amnesty program (REFIS).

However, certain appeals by ANDRITZ relating to these claims are still active. As Inepar failed to comply with its obligation under the REFIS program, the tax proceedings against ANDRITZ HYDRO S.A. may be resumed.

37. Expenses for services by the group auditor

(in TEUR)	2019	2018
Year-end audits	422	336
Other reviews	12	11
Other services	37	28
Total	471	375

38. Events after the balance sheet date

There were no events of material significance after the balance sheet date.

39. Group companies

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
Anstalt für Strömungsmaschinen GmbH	Graz, Austria	100.00%	NC	100.00%	NC
ANDRITZ Technology and Asset Management GmbH	Graz, Austria	100.00%	FC	100.00%	FC
ANDRITZ Power & Water GmbH	Vienna, Austria	100.00%	FC	100.00%	FC
ANDRITZ Environment S.r.l.	Milan, Italy	100.00%	NC	100.00%	NC
ANDRITZ Environmental Engineering (Shanghai) Co., Ltd.	Shanghai, China	100.00%	FC	100.00%	FC
ANDRITZ SEPARATION GmbH ²⁾	Cologne, Germany	100.00%	FC	100.00%	FC
LENSER Filtration GmbH ²⁾	Senden, Germany	100.00%	FC	100.00%	FC
Lenzer Asia Sdn. Bhd.	Petaling Jaya, Malaysia	100.00%	FC	100.00%	FC
Modul Systeme Engineering GmbH ²⁾	Laufen, Germany	100.00%	FC	100.00%	FC
ANDRITZ KMPT GmbH ²⁾	Vierkirchen, Germany	100.00%	FC	100.00%	FC
ANDRITZ KMPT Inc.	Florence / Kentucky, USA	100.00%	FC	100.00%	FC
ANDRITZ FBB GmbH ²⁾	Mönchengladbach, Germany	100.00%	FC	100.00%	FC
ANDRITZ Deutschland Beteiligungs GmbH	Krefeld, Germany	100.00%	FC	100.00%	FC
ANDRITZ Ritz Immobilien GmbH	Krefeld, Germany	100.00%	FC	100.00%	FC
TANIAM GmbH & Co. KG	Pullach im Isartal, Germany	100.00%	FC	100.00%	FC
ANDRITZ GmbH	Hemer, Germany	100.00%	FC	100.00%	FC
ANDRITZ Kaiser GmbH	Bretten-Gölshausen, Germany	100.00%	FC	100.00%	FC
ANDRITZ Sundwig GmbH	Hemer, Germany	100.00%	FC	100.00%	FC
ANDRITZ Fiedler GmbH	Regensburg, Germany	100.00%	FC	100.00%	FC
ANDRITZ Fließbett Systeme GmbH	Ravensburg, Germany	100.00%	FC	100.00%	FC
Lenzer Verwaltungs GmbH	Senden, Germany	100.00%	FC	100.00%	FC
ANDRITZ S.R.L.	Cisnădie, Romania	100.00%	NC	100.00%	NC
ANDRITZ HYDRO GmbH	Ravensburg, Germany	100.00%	FC	100.00%	FC
ANDRITZ Küsters GmbH	Krefeld, Germany	100.00%	FC	100.00%	FC
ANDRITZ Kufferath GmbH	Düren, Germany	100.00%	FC	100.00%	FC
AKRE Real Estate GmbH	Düren, Germany	100.00%	FC	100.00%	FC
ANDRITZ Maerz GmbH	Düsseldorf, Germany	100.00%	FC	100.00%	FC
ANDRITZ Ritz GmbH	Schwäbisch Gmünd, Germany	100.00%	FC	100.00%	FC
ANDRITZ Atro GmbH	Schwäbisch Gmünd, Germany	100.00%	FC	100.00%	FC
ANDRITZ Ritz Pte. Ltd.	Singapore, Singapore	100.00%	NC	100.00%	FC
Ritz Pumps South Africa (Pty) Ltd.	Germiston, South Africa	25.00%	NC	25.00%	NC
Ritz - Verwaltungsgesellschaft mit beschränkter Haftung	Schwäbisch Gmünd, Germany	100.00%	NC	100.00%	NC
ANDRITZ MeWa GmbH	Gechingen, Germany	100.00%	FC	100.00%	FC
ANDRITZ MeWa Kft.	Győr, Hungary	100.00%	NC	100.00%	NC
HGI Holdings Limited	Limassol, Cyprus	100.00%	NC	100.00%	NC
ANDRITZ SEPARATION AND PUMP TECHNOLOGIES INDIA PRIVATE LIMITED	Chennai, India	100.00%	FC	100.00%	FC
ANDRITZ Slovakia s.r.o.	Humenné, Slovakia	100.00%	FC	100.00%	FC
ANDRITZ HYDRO GmbH	Vienna, Austria	100.00%	FC	100.00%	FC
ANDRITZ HYDRO SAS	Fontaine, France	100.00%	FC	100.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
ANDRITZ HYDRO Private Ltd.	Mandideep, India	100.00%	FC	100.00%	FC
ANDRITZ HYDRO Nepal Pvt. Ltd.	Kathmandu, Nepal	100.00%	NC	100.00%	NC
Bhutan Automation & Engineering Limited	Chhukha, Bhutan	49.00%	NC	49.00%	NC
ANDRITZ HYDRO S.L.	Algete, Spain	100.00%	FC	100.00%	FC
ANDRITZ HYDRO S.r.l., Unipersonale	Schio, Italia	100.00%	FC	100.00%	FC
ANDRITZ HYDRO AG	Kriens, Switzerland	100.00%	FC	100.00%	FC
ANDRITZ HYDRO S.A. de C.V.	Morelia, Mexico	100.00%	FC	100.00%	FC
ANDRITZ HYDRO AS	Jevnaker, Norway	100.00%	FC	100.00%	FC
ANDRITZ Hydro S.A. Panama	El Dorado, Panama	-	-	100.00%	NC
ANDRITZ HYDRO Ltd. Sti.	Tekeli, Turkey	100.00%	FC	100.00%	FC
PT. ANDRITZ HYDRO	Jakarta, Indonesia	51.00%	FC	51.00%	FC
ANDRITZ HYDRO S.A.	Lima, Peru	100.00%	NC	100.00%	NC
ANDRITZ HYDRO (Pty) Ltd	Kyalami, South Africa	100.00%	NC	100.00%	NC
ANDRITZ HYDRO Ltda.	Bogotá, Colombia	100.00%	FC	100.00%	FC
ANDRITZ HYDRO s.r.o.	Prague, Czech Republic	100.00%	NC	100.00%	NC
ANDRITZ O&M Private Limited	Mandideep, India	100.00%	FC	100.00%	FC
ANDRITZ HYDRO C.A.	Caracas, Venezuela	100.00%	NC	100.00%	NC
ANDRITZ Sdn. Bhd.	Kuala Lumpur, Malaysia	100.00%	NC	100.00%	NC
ANDRITZ HYDRO, Inc.	Makati City, Philippines	100.00%	NC	100.00%	NC
PHP PHILIPPINES HYDRO PROJECT, Inc.	Makati City, Philippines	24.98%	NC	24.98%	NC
ANDRITZ Ulu Jelai Project Sdn. Bhd.	Kuala Lumpur, Malaysia	-	-	100.00%	NC
ANDRITZ HYDRO Hammerfest AS	Hammerfest, Norway	100.00%	FC	100.00%	FC
ANDRITZ HYDRO Hammerfest (UK) Limited	Glasgow, United Kingdom	100.00%	FC	100.00%	FC
ANDRITZ HYDRO, UNIPESOAL LDA	Porto, Portugal	100.00%	NC	100.00%	NC
ANDRITZ HYDRO DRC SARL	Kinshasa, Democratic Republic of the Congo	100.00%	NC	100.00%	NC
AH PUMPSTORAGE GmbH	Vienna, Austria	60.00%	NC	60.00%	NC
ANDRITZ HYDRO Beteiligungsholding GmbH	Graz, Austria	100.00%	FC	100.00%	FC
ANDRITZ HYDRO Brasilien Beteiligungsgesellschaft mbH	Graz, Austria	100.00%	FC	100.00%	FC
ANDRITZ HYDRO LTDA.	Barueri, Brazil	100.00%	FC	100.00%	FC
ANDRITZ Construcões e Montagens Ltda	Barueri, Brazil	100.00%	FC	100.00%	FC
ANDRITZ HYDRO (SU), LDA.	Luanda, Angola	100.00%	NC	100.00%	NC
ANDRITZ HYDRO VIETNAM COMPANY LIMITED	Hanoi, Vietnam	100.00%	NC	100.00%	NC
ANDRITZ FEED & BIOFUEL A/S	Esbjerg, Denmark	100.00%	FC	100.00%	FC
ANDRITZ FEED & BIOFUEL Brasil Ltda.	Curitiba, Brazil	100.00%	NC	100.00%	NC
ANDRITZ Chile Ltda.	Santiago de Chile, Chile	100.00%	FC	100.00%	FC
Andritz Metaliza S.A.	Santiago de Chile, Chile	-	-	50.00%	NC
ANDRITZ CHILE SITE SERVICES SpA	Santiago de Chile, Chile	100.00%	NC	100.00%	NC
ANDRITZ CHILE SERVICES SpA	Santiago de Chile, Chile	100.00%	NC	100.00%	NC
POWERLASE TECHNOLOGIES HOLDINGS LIMITED	West Sussex, United Kingdom	82.00%	NC	80.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
POWERLASE TECHNOLOGIES LIMITED	West Sussex, United Kingdom	100.00%	NC	100.00%	FC
Powerlase Technologies Inc.	Orlando / Florida, USA	100.00%	NC	100.00%	FC
ANDRITZ (USA) Inc.	Alpharetta / Georgia, USA	100.00%	FC	100.00%	FC
ANDRITZ Inc.	Alpharetta / Georgia, USA	100.00%	FC	100.00%	FC
ANDRITZ SHW Inc.	Torrington / Connecticut, USA	-	-	100.00%	FC
ANDRITZ SEPARATION Inc.	Arlington / Texas, USA	100.00%	FC	100.00%	FC
ANDRITZ SEPARATION Technologies Inc.	Arlington / Texas, USA	100.00%	FC	100.00%	FC
ANDRITZ HYDRO Corp.	Charlotte / North Carolina, USA	100.00%	FC	100.00%	FC
ANDRITZ METALS Inc.	Canonsburg / Pennsylvania, USA	100.00%	FC	100.00%	FC
Genesis Worldwide II, Inc.	Alpharetta / Georgia, USA	100.00%	FC	100.00%	FC
ANDRITZ Herr-Voss Stamco, Inc.	Callery / Pennsylvania, USA	100.00%	FC	100.00%	FC
ANDRITZ ASKO Inc.	Homestead / Pennsylvania, USA	100.00%	FC	100.00%	FC
ANDRITZ ASKO Emera B.V.	Amsterdam, The Netherlands	100.00%	FC	100.00%	FC
ANDRITZ ASKO B.V.	Amsterdam, The Netherlands	100.00%	FC	100.00%	FC
SOTEC S.A. de C.V.	San Francisco Cuautlalpan, Mexico	25.00%	NC	25.00%	NC
Andritz Fabrics and Rolls Inc.	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium Asia, LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium Asia Holding Limited	Hong Kong, China	100.00%	FC	100.00%	FC
Beloit Asia Pacific (M) Inc.	Port Louis, Mauritius	100.00%	FC	100.00%	FC
Stowe Woodward (Xi'an) Roll Covering Co. Ltd.	Xi'an, China	90.00%	FC	90.00%	FC
Stowe Woodward (Changzhou) Roll Technologies Co. Ltd.	Changzhou, China	100.00%	FC	100.00%	FC
Xerium China Co. Ltd.	Kunshan City, China	100.00%	FC	100.00%	FC
Xerium Asia Pacific (Shanghai) Ltd.	Shanghai, China	100.00%	FC	100.00%	FC
Huyck Wangner (Shanghai) Trading Co. Ltd.	Shanghai, China	100.00%	FC	100.00%	FC
JJ Plank Company, LLC	Neenah / Wisconsin, USA	100.00%	FC	100.00%	FC
Weavexx, LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Huyck.Wangner Japan Limited	Tokyo, Japan	100.00%	FC	100.00%	FC
Xerium Argentina SA	Berazategui, Argentina	100.00%	FC	100.00%	FC
Huyck Licensco Inc.	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium III (US) Limited	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium V (US) Limited	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium Canada Inc.	Kentville, Canada	100.00%	FC	100.00%	FC
Xerium Technologies Chile SpA	Coronel, Chile	100.00%	FC	100.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
Stowe Woodward LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Stowe Woodward Licensco LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
XTI, LLC	Youngsville / North Carolina, USA	-	-	100.00%	FC
Wangner Itelpa I LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Wangner Itelpa Participacoes Ltda	Piracicaba, Brazil	100.00%	FC	100.00%	FC
Wangner Itelpa II LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium IV (US) Limited	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium do Brasil Ltda	Piracicaba, Brazil	100.00%	FC	100.00%	FC
Robec Brazil LLC	Youngsville / North Carolina, USA	100.00%	FC	100.00%	FC
Xerium Technologies Brasil Indústria e Comércio SA	Piracicaba, Brazil	100.00%	FC	100.00%	FC
ANDRITZ FABRICS AND ROLLS S.A. de C.V.	Queretaro, Mexico	100.00%	FC	100.00%	FC
Andritz Fabrics and Rolls Germany Holding GmbH	Reutlingen, Germany	100.00%	FC	100.00%	FC
Robec Walzen GmbH	Düren, Germany	100.00%	FC	100.00%	FC
Andritz Fabrics and Rolls AG	Düren, Germany	99.55%	FC	99.55%	FC
Huyck.Wangner Germany GmbH	Reutlingen, Germany	100.00%	FC	100.00%	FC
Stowe Woodward Sweden AB	Uppsala, Sweden	100.00%	FC	100.00%	FC
Huyck.Wangner Scandinavia Aktiebolag	Uppsala, Sweden	100.00%	FC	100.00%	FC
HUYCK WANGNER SPAIN SA	Madrid, Spain	100.00%	FC	100.00%	FC
ANDRITZ JohnsonFolts Limited	Chachoengsao, Thailand	100.00%	FC	100.00%	FC
XERIUM TECHNOLOGIES LIMITED	London, United Kingdom	100.00%	FC	100.00%	FC
Huyck.Wangner UK Limited	Kent, United Kingdom	100.00%	FC	100.00%	FC
Stowe-Woodward (UK) Limited	London, United Kingdom	100.00%	FC	100.00%	FC
Xerium (France) SAS	Paris, France	100.00%	FC	100.00%	FC
Stowe Woodward France S.A.	Ville-la-grand, France	100.00%	FC	100.00%	FC
HUYCK.WANGNER Austria GmbH	Gloggnitz, Austria	100.00%	FC	100.00%	FC
Stowe Woodward Finland Oy	Kerava, Finland	100.00%	FC	100.00%	FC
XERIUM ITALIA S.p.A.	Milan, Italy	100.00%	FC	100.00%	FC
HUYCK.WANGNER ITALIA S.p.A.	Latina, Italy	100.00%	FC	100.00%	FC
Xerium Technologies Makina Hizmetleri Sanayi LS	Corlu/Tekirdag, Turkey	100.00%	FC	100.00%	FC
Huyck.Wangner Australia Pty Ltd.	Geelong, Australia	100.00%	FC	100.00%	FC
ANDRITZ SAS	Châteauroux, France	100.00%	FC	100.00%	FC
ANDRITZ Selas SAS	Asnières-sur-Seine, France	100.00%	FC	100.00%	FC
ANDRITZ Selas Tianjin Industrial Furnace Equipment Co., Ltd.	Tianjin, China	40.00%	NC	40.00%	NC
Jaybee Eng. (Holdings) Pty. Ltd.	Carrum Downs / Victoria, Australia	100.00%	FC	100.00%	FC
ANDRITZ Pty. Ltd.	Carrum Downs / Victoria, Australia	100.00%	FC	100.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
ANDRITZ (NZ) Ltd.	Tauranga, New Zealand	100.00%	FC	100.00%	FC
ANDRITZ Ingeniería S.A.	Algete, Spain	100.00%	FC	100.00%	FC
ANDRITZ Brasil Ltda.	Curitiba, Brazil	100.00%	FC	100.00%	FC
ANDRITZ SEPARATION Indústria e Comércio de Equipamentos de Filtração Ltda.	Pomerode, Brazil	100.00%	FC	100.00%	FC
Sindus ANDRITZ Ltda.	Porto Alegre, Brazil	100.00%	FC	100.00%	FC
ANDRITZ Pilão Equipamentos Ltda.	Curitiba, Brazil	100.00%	FC	100.00%	FC
ANDRITZ Oy	Helsinki, Finland	100.00%	FC	100.00%	FC
ANDRITZ Savonlinna Works Oy	Savonlinna, Finland	100.00%	FC	100.00%	FC
ANDRITZ HYDRO Oy	Tampere, Finland	100.00%	FC	100.00%	FC
ANDRITZ Warkaus Works Oy	Varkaus, Finland	100.00%	FC	100.00%	FC
Enmas ANDRITZ Pvt. Ltd.	Chennai, India	40.00%	EQ	40.00%	EQ
Viafin Brazil Oy	Teuva, Finland	40.00%	EQ	40.00%	EQ
ANDRITZ HYDRO Canada Inc.	Pointe-Claire / Québec, Canada	100.00%	FC	100.00%	FC
ANDRITZ Ltd.	Lachine / Québec, Canada	100.00%	FC	100.00%	FC
ANDRITZ Paper Machinery Ltd.	Lachine / Québec, Canada	100.00%	FC	100.00%	FC
ANDRITZ AUTOMATION Ltd.	Richmond / British Columbia, Canada	100.00%	FC	100.00%	FC
HMI Canada Inc.	Boucherville / Québec, Canada	100.00%	FC	100.00%	FC
HME Consultants Inc.	Boucherville / Québec, Canada	100.00%	FC	100.00%	FC
HMI Construction Inc.	Boucherville / Québec, Canada	100.00%	FC	100.00%	FC
ANDRITZ Feed and Biofuel Canada Inc.	Blenheim / Ontario, Canada	100.00%	FC	100.00%	FC
ANDRITZ Asselin-Thibault S.A.S.	Elbeuf, France	100.00%	FC	100.00%	FC
ANDRITZ Gouda B.V.	Waddinxveen, The Netherlands	100.00%	FC	100.00%	FC
S.A.S.J.E. Duprat & Cie	La Roche Blanche, France	100.00%	NC	100.00%	NC
ANDRITZ AB	Örnsköldsvik, Sweden	100.00%	FC	100.00%	FC
ANDRITZ HYDRO AB	Nälden, Sweden	100.00%	FC	100.00%	FC
ANDRITZ Technologies AB	Stockholm, Sweden	51.00%	NC	51.00%	NC
ANDRITZ Ltd.	Newcastle-under-Lyme, United Kingdom	100.00%	FC	100.00%	FC
ANDRITZ (China) Ltd.	Foshan, China	100.00%	FC	100.00%	FC
ANDRITZ (Shanghai) Equipment & Engineering Co., Ltd.	Shanghai, China	100.00%	FC	100.00%	FC
ANDRITZ SHENDE (SHANGHAI) FEED & BIOFUEL CO., LTD.	Shanghai, China	100.00%	FC	100.00%	FC
ANDRITZ-Wolfensberger Special Alloy Foundry Co. Ltd.	Foshan, China	-	-	100.00%	FC
ANDRITZ Technologies H.K. Ltd.	Hong Kong, China	100.00%	FC	100.00%	FC
ANDRITZ Thermtec Holding B.V.	Rotterdam, The Netherlands	100.00%	FC	100.00%	FC
ANDRITZ Thermtec B.V.	Rotterdam, The Netherlands	100.00%	FC	100.00%	FC
ANDRITZ Technologies Pvt. Ltd.	Bangalore, India	100.00%	FC	100.00%	FC
ANDRITZ FEED & BIOFUEL Ltd.	Hull, United Kingdom	100.00%	FC	100.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
ANDRITZ FEED & BIOFUEL B.V.	Geldrop, The Netherlands	100.00%	FC	100.00%	FC
ANDRITZ B.V.	Den Helder, The Netherlands	100.00%	FC	100.00%	FC
ANDRITZ Singapore Pte. Ltd.	Singapore, Singapore	100.00%	FC	100.00%	FC
ANDRITZ Uruguay S.A.	Fray Bentos, Uruguay	100.00%	FC	100.00%	FC
ANDRITZ Industrias S.A.	Fray Bentos, Uruguay	100.00%	NC	100.00%	NC
ANDRITZ PULP TECHNOLOGIES S.A.	Montevideo, Uruguay	100.00%	FC	100.00%	FC
ANDRITZ K.K.	Tokyo, Japan	100.00%	FC	100.00%	FC
ANDRITZ DELKOR (Pty) Ltd.	Kyalami, South Africa	100.00%	FC	100.00%	FC
GKD Delkor (Pty) Ltd.	Kyalami, South Africa	100.00%	NC	100.00%	NC
PT. ANDRITZ	Jakarta, Indonesia	100.00%	FC	100.00%	FC
LLC ANDRITZ	St. Petersburg, Russia	100.00%	FC	100.00%	FC
LLC ANDRITZ HYDRO	Moscow, Russia	100.00%	NC	100.00%	NC
ANDRITZ Kufferath s.r.o.	Levice, Slovakia	100.00%	FC	100.00%	FC
ANDRITZ Kft.	Tiszakécske, Hungary	100.00%	FC	100.00%	FC
ANDRITZ Perfojet SAS	Montbonnot Saint- Martin, France	100.00%	FC	100.00%	FC
ANDRITZ Biax SAS	Le Bourget du Lac, France	100.00%	NC	100.00%	FC
ANDRITZ Frautech S.r.l.	Schio, Italia	100.00%	FC	100.00%	FC
ProGENF IP GmbH	Wolfsburg, Germany	30.00%	NC	30.00%	NC
ANDRITZ COMO S.R.L.	Grandate, Italy	100.00%	NC	100.00%	NC
ANDRITZ Soutec AG	Neftenbach, Switzerland	100.00%	FC	100.00%	FC
EK Finance SAS	Scorbé-Clairvaux, France	100.00%	FC	100.00%	FC
ANDRITZ Euroslot France SAS	Scorbé-Clairvaux, France	100.00%	FC	100.00%	FC
ANDRITZ EUROSLOT INDIA PRIVATE LIMITED	Mumbai, India	100.00%	NC	74.00%	NC
ANDRITZ FZCO	Dubai, United Arab Emirates	100.00%	NC	100.00%	NC
OTORIO LTD	Tel Aviv, Israel	50.01%	FC	50.01%	FC
ANDRITZ Novimpianti S.r.l.	Capannori, Italy	100.00%	FC	100.00%	FC
ANDRITZ Diatec S.r.l.	Collecorvino, Italy	70.00%	FC	70.00%	FC
Psiori GmbH	Freiburg im Breisgau, Germany	25.10%	EQ	25.10%	EQ
ANDRITZ Beteiligungsgesellschaft IV GmbH	Krefeld, Germany	100.00%	FC	100.00%	FC
Schuler Aktiengesellschaft	Göppingen, Germany	96.62%	FC	96.62%	FC
Schuler Pressen GmbH	Göppingen, Germany	100.00%	FC	100.00%	FC
Schuler Italia S.r.l.	Turin, Italy	90.00%	NC	90.00%	NC
Schuler (Dalian) Forming Technologies Co. Ltd.	Dalian, China	100.00%	FC	100.00%	FC
Schuler (China) Co., Ltd.	Shanghai, China	100.00%	FC	100.00%	FC
Yangzhou Metal Forming Machine Tool Co., Ltd.	Yangzhou City, China	100.00%	FC	52.90%	FC
Beutler Nova AG	Gettnau, Switzerland	100.00%	FC	100.00%	FC
Schuler Presses UK Limited	Walsall, United Kingdom	100.00%	FC	100.00%	FC

Company	Main office	2019		2018	
		Share*	Type of consolidation	Share*	Type of consolidation
BCN Technical Services Inc.	Hastings / Michigan, USA	100.00%	FC	100.00%	FC
Pressensysteme Schuler-México, S.A. de C.V.	Puebla, Mexico	100.00%	FC	100.00%	FC
Schuler Thailand Co. Ltd.	Banglamung Chonburi, Thailand	100.00%	NC	100.00%	NC
Gräbener Pressensysteme GmbH & Co. KG ¹⁾	Netphen, Germany	100.00%	FC	100.00%	FC
Vögtle Service GmbH	Eislingen, Germany	100.00%	FC	100.00%	FC
Schuler France S.A.	Strasbourg, France	100.00%	FC	100.00%	FC
Schuler Inc.	Canton / Michigan, USA	100.00%	FC	100.00%	FC
Prensas Schuler S.A.	São Paulo, Brazil	100.00%	FC	100.00%	FC
Gräbener Pressensysteme-Verwaltungs GmbH	Netphen, Germany	100.00%	NC	100.00%	NC
Graebener Press Systems Inc.	Warwick / Rhode Island, USA	100.00%	NC	100.00%	NC
Schuler Ibérica S.A.U.	Sant Cugat del Vallès, Spain	100.00%	NC	100.00%	NC
Schuler Slovakia Services s.r.o.	Dubnica nad Váhom, Slovakia	100.00%	NC	100.00%	NC
Schuler India Private Limited	Mumbai, India	100.00%	NC	100.00%	NC
Schuler Poland Service Sp. Z.o.o.	Kedzierzyn-Kózle, Poland	100.00%	NC	100.00%	NC
Tianjin GMS Machine Tool Service Co. Ltd.	Tianjin, China	50.00%	NC	50.00%	NC
PRESSE ITALIA - S.p.A.	Naples, Italy	95.00%	NC	95.00%	NC
AWEBA Werkzeugbau GmbH Aue	Aue, Germany	100.00%	FC	100.00%	FC
WVL Werkzeug- und Vorrichtungsbau Lichtenstein GmbH	St. Egidien, Germany	100.00%	FC	100.00%	FC
Dabaki Grundstücksverwaltungs-gesellschaft mbH & Co. Vermietungs KG	Mainz, Germany	94.00%	FC	94.00%	FC
PTW Powertrain Tools Weingarten GmbH	Weingarten, Germany	100.00%	FC	-	-
LLC Schuler Service Rus	Toljatti, Russia	100.00%	NC	100.00%	NC
Farina Presse S.p.A.	Suello, Italy	100.00%	FC	100.00%	FC
Farina Presse S.r.l.	Suello, Italy	100.00%	FC	100.00%	FC
Farina Suisse Sagl	Lugano, Switzerland	100.00%	NC	100.00%	NC
Smart Press Shop GmbH & Co KG	Stuttgart, Germany	50.00%	EQ	-	-
Smart Press Shop Verwaltungs-GmbH	Stuttgart, Germany	50.00%	NC	-	-

* The share is shown as the share of the immediate parent company. If a subsidiary has more than one immediate parent company within the ANDRITZ GROUP the subsidiary is included with its share of the total ANDRITZ GROUP under the parent company with the majority share.

FC ... Full consolidation

EQ ... Equity valuation

NC ... Non-consolidated due to minor importance

1) The exemption rule according to section 264b HGB (German Commercial Code) is applied.

2) The exemption rule according to section 264 paragraph 3 HGB (German Commercial Code) is applied (loss transfer agreement exists).

Graz, February 21, 2020

Wolfgang Leitner e.h.
(President and CEO)

Humbert Köfler e.h.

Norbert Nettesheim e.h.
(Chief Financial Officer)

Joachim Schönbeck e.h.

Wolfgang Semper e.h.

STATEMENT BY THE EXECUTIVE BOARD

STATEMENT BY THE EXECUTIVE BOARD OF ANDRITZ AG, PURSUANT TO SECTION 124 PARAGRAPH 1 OF THE (AUSTRIAN) STOCK EXCHANGE ACT

We confirm to the best of our knowledge that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position, and profit or loss of the Group as required by the applicable accounting standards and that the Group management report gives a true and fair view of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties the Group faces.

We confirm to the best of our knowledge that the financial statements of the parent company give a true and fair view of the assets, liabilities, financial position, and profit or loss as required by the applicable accounting standards and that the management report gives a true and fair view of the development and performance of the business and the position of the company, together with a description of the principal risks and uncertainties the company faces.

Graz, February 21, 2020

The Executive Board of ANDRITZ AG



Wolfgang Leitner
President and CEO



Humbert Köfler
Pulp & Paper
(Service),
Separation



Norbert Nettesheim
Chief Financial Officer



Joachim Schönbeck
Pulp & Paper
(Capital Systems),
Metals Processing



Wolfgang Semper
Hydro

GLOSSARY

ATX

Austrian Traded Index, the leading stock market index of the Vienna stock exchange.

Capital employed

Net working capital plus intangible assets and property, plant, and equipment.

Capital expenditure

Additions to intangible assets and property, plant, and equipment.

CGU

Cash generating unit.

Dividend per share

Part of earnings per share, which is distributed to shareholders.

Earnings per share

Net income (without non-controlling interests)/ weighted average number of no-par value shares.

EBIT

Earnings before interest and taxes.

EBITA

Earnings before interest, taxes, amortization of identifiable assets acquired in a business combination and recognized separately from goodwill and impairment of goodwill.

EBITDA

Earnings before interest, taxes, depreciation, and amortization.

EBT

Earnings before taxes.

Employees

Number of employees without apprentices.

Equity ratio

Total shareholders' equity/total assets.

EV

Enterprise Value: Market capitalization as of end of year minus net liquidity.

Free cash flow

Cash flow from operating activities minus capital expenditure plus payments received for disposals of property, plant, and equipment and intangible assets.

Free cash flow per share

Free cash flow/total number of shares.

FVTOCI

Fair Value through other comprehensive income.

FVTPL

Fair Value through profit and loss.

Gearing

Net debt/total shareholders' equity.

HY

Hydro business area.

Liquid funds

Cash and cash equivalents plus investments plus Schuldscheindarlehen.

Market capitalization

Number of shares outstanding multiplied by the closing price.

ME

Metals business area.

MEUR

Million euros.

Net debt

Interest bearing liabilities including provisions for severance payments, pensions, and jubilee payments less liquid funds.

Net liquidity

Liquid funds plus fair value of interest rate swaps less financial liabilities.

Net working capital

Non-current receivables plus current assets (excluding investments, cash and cash equivalents as well as Schuldscheindarlehen) less other non-current liabilities and current liabilities (excluding financial liabilities and provisions).

Order backlog

The order backlog consists of present customer orders at the balance sheet date. Basically, it is calculated by the order backlog at the beginning of the period plus new order intake during the period less sales during the period.

Order intake

The order intake is the estimated order sales which have already been put into effect considering changes and corrections of the order value; letter of intents are not part of the order intake.

Payout ratio

Part of net income, which is distributed to shareholders. It is calculated as dividend per share/ earnings per share.

PP

Pulp & Paper business area.

Return on equity

Earnings before taxes/total shareholder's equity.

Return on investment

Earnings before interest and taxes/total assets.

Return on sales

Earnings before interest and taxes/sales.

ROE

Return On Equity: Net income/total shareholder's equity.

SE

Separation business area.

Sureties

These contain bid bonds, contract performance guarantees, down payment guarantees as well as performance and warranty bonds at the expense of the ANDRITZ GROUP.

TEUR

Thousand euros.

Total shareholders' equity

Total shareholders' equity including non-controlling interests.

AUDITOR'S REPORT

REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

Audit Opinion

We have audited the consolidated financial statements of

Andritz AG,
Graz

and its subsidiaries ("the Group"), which comprise the consolidated comprise the Consolidated Statement of Financial Position as at as at 31 December 2019, and the Consolidated Income Statement, the Consolidated Statement of Comprehensive Income, Consolidated Statement of Changes in Equity and Consolidated Statement of Cash Flows for the year then ended, and the Notes to the Consolidated Financial Statements.

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of 31 December 2019, and its consolidated financial performance and consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs) as adopted by the EU, the additional requirements pursuant to Section 245a UGB (Austrian Commercial Code).

Basis for our Opinion

We conducted our audit in accordance with the EU Regulation 537/2014 ("EU Audit Regulation") and Austrian Standards on Auditing. These standards require the audit to be conducted in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the "Auditor's Responsibilities" section of our report. We are independent of the Group in accordance with Austrian company law and professional regulations, and we have fulfilled our other responsibilities under those relevant ethical requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, however, we do not provide a separate opinion thereon.

Project Accounting

Refer to notes 9 and par. 23

Risk for the Consolidated Financial Statements

A major component of the revenues and net income contribution is derived from the project business. The project business comprises a large number of projects with individual project revenues of more than EUR 100 million and project terms extending over several years. When certain criteria are met, revenue is recognized over time according to the progress of the respective projects, which is measured using the cost to cost-method. This method is not applied to projects for which a project loss is expected. Such loss is immediately recognized in the income statement. For completed projects the Group is liable for warranty over a defined period of time. In certain active and completed projects, the Group is involved with customers and/or suppliers with regard to contractual obligations, resulting in potential or active legal proceedings. The Group recognizes provisions for warranty liabilities as well as for potential obligations as a result of legal proceedings. The application of over time revenue recognition, determination of the stage of completion, the estimate of costs to complete as well as the measurement of project provisions require a substantial number of assumptions and forward looking estimates.

This report is a translation of the original report in German, which is solely valid.

Due to the significant volume of project business, this results in a risk of project revenue, net income, and project-related balance sheet items being materially misstated.

Our response

We have assessed the project accounting as follows:

- When performing our audit, we obtained an understanding of the processes and internal controls relevant to project accounting and we tested the effectiveness of selected internal controls. This relates specifically to internal controls with respect to approval of project cost estimates at contract inception, approval of the ongoing cost status reports, the actual cost-to-budget-analysis, the status reports relating to current projects, and estimate of the amount of outstanding or potentially outstanding costs to complete the project. Based on the results of these tests, we have planned additional audit procedures.
- We have applied these procedures to selected current projects and we have assessed management's assumptions regarding those projects. The selection was based on risk criteria such as project volume, low or negative project margin or significant margin changes. Audit procedures mainly included: review of underlying contracts and agreements, a plausibility check on current project information, inquiries of individuals responsible for project execution or project controlling as to the reasonableness of estimates and assumptions used, evaluation of the accuracy of accounting estimates by comparing actual results to prior period estimates, and a reconciliation of the assumptions used for estimates with contract information and other relevant documents.
- In addition, we have evaluated the method used to determine the stage of completion and the proper allocation of contract cost to individual contracts.
- To assess whether the provisions for litigations and claims from costumers are appropriate, we have read the relevant documents, obtained attorney confirmation letters and discussed the cases with personnel involved and inspected their documentation.
- In addition, we have assessed whether the presentation of the project business in the consolidated financial statements as well as the disclosures in the notes are in line with the IFRS 15 requirements.

Valuation of Goodwill

Refer to note 19

Risk for the Consolidated Financial Statements

Goodwill capitalized in the consolidated statement of financial position as of 31 December 2018 amounts to EUR 776.9 million. Once a year, or if a triggering event occurs, Andritz AG conducts an impairment test in order to confirm the valuation of goodwill. The approach for measuring goodwill, the allocation of goodwill to the cash generating units as well as the assumptions used and the results of the impairment tests are described in the notes.

Testing goodwill for impairment requires a considerable number of estimates concerning future development of revenues, earnings, and net cash inflows as well as assumptions on discount rates used, and is therefore exposed to significant uncertainty. For the financial statements, this leads to the risk of goodwill being overstated.

Our response

We have assessed the project accounting as follows:

- We have evaluated the reasonableness of forward looking estimates and significant assumptions as well as the valuation methodologies used, consulting our own valuation experts.
- We have reconciled the revenue and margin projections used for impairment testing to the Group's current business plan as approved by the supervisory board. We have tested the underlying assumptions for reasonableness in discussions with the management and reconciliation to information relating to the current and

expected development of the respective cash generating units. We also verified the historical accuracy of the business plan by comparing plans for prior periods with the actual results.

- With regard to the discount rates used, we have tested the underlying assumptions by comparing them to market- and industry-specific benchmarks and methodologies, and we have reviewed the respective calculation formula, consulting our own valuation experts. Insofar as there are CGUs with excess returns we verified the reasons using historical data as well as future market- and economic positions.
- Furthermore we have assessed whether the entity-prepared impairment test disclosures in the notes are appropriate.

Responsibilities of Management and the Audit Committee for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the EU, the additional requirements pursuant to Section 245a UGB (Austrian Commercial Code) and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Management is also responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The audit committee is responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement – whether due to fraud or error – and to issue an auditor's report that includes our audit opinion. Reasonable assurance represents a high level of assurance, but provides no guarantee that an audit conducted in accordance with the AP Regulation and Austrian Standards on Auditing (and therefore ISAs), will always detect a material misstatement, if any. Misstatements may result from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the AP Regulation and Austrian Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit.

Moreover:

- We identify and assess the risks of material misstatement in the consolidated financial statements, whether due to fraud or error, we design and perform audit procedures responsive to those risks and obtain sufficient and appropriate audit evidence to serve as a basis for our audit opinion. The risk of not detecting material misstatements resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

This report is a translation of the original report in German, which is solely valid.

- We conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our audit report to the respective note in the consolidated financial statements. If such disclosures are not appropriate, we will modify our audit opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the consolidated financial statements, including the notes, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- We obtain sufficient appropriate audit evidence regarding the financial information of the entities and business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.
- We communicate with the audit committee regarding, amongst other matters, the planned scope and timing of our audit as well as significant findings, including any significant deficiencies in internal control that we identify during our audit.
- We communicate to the audit committee that we have complied with the relevant professional requirements in respect of our independence, that we will report any relationships and other events that could reasonably affect our independence and, where appropriate, the related safeguards.
- From the matters communicated with the audit committee, we determine those matters that were of most significance in the audit i.e. key audit matters. We describe these key audit matters in our auditor's report unless laws or other legal regulations preclude public disclosure about the matter or when in very rare cases, we determine that a matter should not be included in our audit report because the negative consequences of doing so would reasonably be expected to outweigh the public benefits of such communication.

REPORT ON OTHER LEGAL REQUIREMENTS

Group Management Report

In accordance with Austrian company law, the group management report is to be audited as to whether it is consistent with the consolidated financial statements and prepared in accordance with legal requirements. It is our responsibility to determine whether the consolidated non-financial statement has been prepared as part of the group management report, to read and assess whether, based on knowledge gained during our audit, it contains any material inconsistencies with the consolidated financial statements or any apparent material misstatement of fact.

Management is responsible for the preparation of the group management report in accordance with Austrian company law.

We have conducted our audit in accordance with generally accepted standards on the audit of group management reports as applied in Austria.

Opinion

In our opinion, the group management report is consistent with the consolidated financial statements and has been prepared in accordance with legal requirements. The disclosures pursuant to Section 243a UGB (Austrian Commercial Code) are appropriate.

Statement

Based on our knowledge gained in the course of the audit of the consolidated financial statements and our understanding of the Group and its environment, we did not note any material misstatements in the group management report.

Other Information

Management is responsible for other information. Other information is all information provided in the annual report, other than the consolidated financial statements, the group management report, and the auditor's report.

Our opinion on the consolidated financial statements does not cover other information and we do not provide any assurance thereon.

In conjunction with our audit, it is our responsibility to read this other information and to assess whether, based on knowledge gained during our audit, it contains any material inconsistencies with the consolidated financial statements or any apparent material misstatement of fact. If we conclude that there is a material misstatement of fact in other information, we must report that fact. We have nothing to report in this regard.

Additional Information in accordance with Article 10 AP Regulation

At the Annual General Meeting dated 27 March 2019, we were elected as group auditors. We were appointed by the Supervisory Board on 17 May 2019. We have been the Group's auditors from the year ended 31 December 2016 without interruption.

We declare that our opinion expressed in the "Report on the Consolidated Financial Statements" section of our report is consistent with our additional report to the Audit Committee, in accordance with Article 11 AP Regulation.

We declare that we have not provided any prohibited non-audit services (Article 5 Paragraph 1 AP Regulation) and that we have ensured our independence throughout the course of the audit, from the audited Group.

ENGAGEMENT PARTNER

The engagement partner is Mr. Mag. Dr. Johannes Bauer.

Vienna, 24. February 2020

KPMG Austria GmbH
Wirtschaftsprüfungs- und Steuerberatungsgesellschaft

Signed by:
Mag. Dr. Johannes Bauer
Wirtschaftsprüfer
(Austrian Chartered Accountant)

This report is a translation of the original report in German, which is solely valid.
The consolidated financial statements together with our auditor's opinion may only be published if the consolidated financial statements and the group management report are identical with the audited version attached to this report. Section 281 Paragraph 2 UGB (Austrian Commercial Code) applies.

GRI INDEX

General standard disclosures

	Short description	Page
Organizational profile		
102-1	Name of organization	Cover
102-2	Activities, brands, products and services	Financial report p.89f, andritz.com
102-3	Location of the organization's headquarters	Graz, Austria
102-4	Overview of the organization's locations	andritz.com
102-5	Nature of ownership and legal form	Financial report p. 51f
102-6	Markets served	Financial report p. 8
102-7	Scale of organization	Annual report, inside cover
102-8	Information on employees and other workers	Financial report p. 167
102-9	Description of organization's supply chain	Financial report p. 36
102-10	Significant changes to the organization and its supply chain	Financial report p. 17
102-11	Precautionary principle or approach	Financial report p. 28ff
102-12	Externally developed charters, principles or other initiatives to which the organization subscribes	Financial report p. 26, p. 35, p. 39
102-13	Memberships of associations	Memberships in associations are held by the respective business areas and are not managed centrally
Strategy		
102-14	Statement from the most senior decision-maker of the organization	Annual report p. 1
Ethics and integrity		
102-16	Values, principles, standards, and norms of behaviour	Financial report p. 63, andritz.com/group-en/about-us
Governance		
102-18	Governance structure and its composition	Financial report p. 54ff
Stakeholder engagement		
102-40	List of stakeholder groups engaged	andritz.com/csr
102-41	Percentage of total employees covered by collective bargaining agreements	Collective bargaining agreements are in place with 47.31% of the workforce. For the rest of the workforce, there are individual agreements based on qualifications and professional experience, as well as legal requirements, which are in line with normal market remuneration. This ensures fair working conditions.
102-42	Identification and selection of stakeholders with whom to engage	Ongoing analyses
102-43	Stakeholder engagement	Financial report p. 26
102-44	Key topics and concerns raised through stakeholder engagement	Financial report p. 26
Reporting practice		
102-45	Entities included in the organization's consolidated financial statements	Financial report p. 147ff
102-46	Defining report content and topic boundaries	Financial report p. 26f
102-47	List of material topics	Financial report p. 27ff
102-48	Restatements of information	No restatements
102-49	Changes in reporting	No significant changes
102-50	Reporting period	2019 (2018 in comparison)
102-51	Date of most recent report	March 4, 2020
102-52	Reporting cycle	annual
102-53	Contact point for questions regarding the report	csr@andritz.com
102-54	Claims of reporting in accordance with the GRI Standards	core

	Short description	Page
102-55	GRI content index	Financial report p. 162ff
102-56	External assurance	Within the framework of NaDiVeG

Category: Economic

Material aspects	Topic-specific disclosures	Page	Omissions/ Explanations
GRI 201: Economic performance			
	Management approach disclosures		
201-2	Direct economic value generated and distributed	Financial report p. 11	
201-2	Financial implications and other risks and opportunities due to climate change	Financial report p. 28, p. 45ff	
201-3	Defined benefit plan obligations and other retirement plans	Financial report p. 94	
201-4	Financial assistance received from government	Financial report p. 94	
GRI 204: Procurement practices			
	Management approach disclosures	Financial report p. 36	
204-1	Proportion of spending on local suppliers	Financial report p. 36	
GRI 205: Anti-corruption			
	Management approach disclosures	Financial report p. 63, andritz.com/compliance	
205-1	Operations assessed for risks related to corruption		Locations are checked on a regular base regarding Compliance issues / ISO 19601 and 37001 certifications
205-2	Communication and training about anti-corruption policies and procedures	Financial report p. 63f	
205-3	Confirmed incidents of corruption and actions taken		Allegations are reviewed and investigated internally. In 2019 no allegations were substantiated on a groupwide level.
GRI 206: Anti-competitive behaviour			
	Management approach disclosures	Financial report p. 63, andritz.com/compliance	
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		No legal actions

Category: Environmental

Material aspects	Topic-specific disclosures	Page	Omissions/ Explanations
GRI 301: Materials			
	Management approach disclosures	Financial report p. 37	
301-1	Materials used by weight or volume	Financial report p. 37	Reported according to share of the purchasing volume
GRI 302: Energy			
	Management approach disclosures	Financial report p. 42	
302-1	Energy consumption within the organization	Financial report p. 42	Reported in Manufacturing, as this is the area with the highest consumption
302-5	Reductions in energy requirement of sold products and services	Financial report p. 45ff	Reported descriptively
GRI 303: Water			
	Management approach disclosures	Financial report p. 43	
303-3	Total water withdrawal by source	Financial report p. 170	Reported in Manufacturing, as this is the area with the highest consumption
GRI 306: Effluents and waste			
	Management approach disclosures	Financial report p. 43	
306-1	Total water discharge	Financial report p. 170	Total water discharge in manufacturing is reported
306-2	Waste by type and disposal method	Financial report p. 171	Reported in Manufacturing
GRI 307: Environmental compliance			
307-1	Non-compliance with environmental laws and regulations		No complaints have been received on a groupwide level in the reporting period
GRI 308: Supplier environmental assessment			
308-1	New suppliers that were screened using environmental criteria	Financial report p. 37	

Category: Social

Material aspects	Topic-specific disclosures	Page	Omissions/ Explanations
GRI 401: Employment			
	Management approach disclosures	Financial report p. 31	
401-1	New employee hires and employee turnover	Financial report p. 168	Reported according to gender and age only
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees		Social benefits are available to all employees regardless of their contract of employment and only vary from one country to another as a result of the legal requirements.
401-3	Parental leaves	Financial report p.168	
GRI 402: Labor/Management relations			
402-1	Minimum notice periods regarding operational changes	Financial report p.34	Reported descriptively
GRI 403: Occupational health and safety			
	Management approach disclosures	Financial report p. 39	
403-2	Hazard identification, risk assessment and incident investigation		Locations have to identify workplace hazards and document them in the Business Process Map. Investigating incidents is an essential part of the "learning from incidents" process. Every accident and safety-critical. Incident must be analysed, the cause identified and measures implemented to prevent similar incidents
403-5			Basic occupational safety training courses are held regularly for new employees throughout the Group; workplace-related training is organized by the locations themselves.
	Employee training on occupational safety and health protection	Financial report p. 40	
403-9	Work-related injuries	Financial report p. 40	
GRI 404: Training and education			
	Management approach disclosures	Financial report p. 32	
404-1	Average hours of training per year per employee	Financial report p. 168	
404-3	Percentage of employees receiving regular performance and career development reviews	Financial report p. 32	
GRI 405: Diversity and equal opportunity			
	Management approach disclosures	Financial report p. 32	
405-1	Diversity of governance bodies and employees	Financial report p.56	
405-2	Ratio of basic salary and remuneration of women to men	Financial report p. 35	
GRI 406: Non-discrimination			
	Management approach disclosures	Financial report p. 34f	

Material aspects	Topic-specific disclosures	Page	Omissions/ Explanations
406-1			Cases of discrimination are dealt with by the regional compliance officers, sometimes in cooperation with the member of the compliance committee responsible for HR topics. At the moment there are no global records concerning the number of incidents.
	Incidents of discrimination and corrective actions taken		
GRI 408: Child labor			
	Management approach disclosures	Financial report p. 34f	
408-1			Even if there is a certain risk of child labor in some countries in which ANDRITZ has locations, child labor locations is virtually precluded through strict internal rules and controls.
	Operations and suppliers at significant risk for incidents of child labor		
GRI 409: Forced or compulsory labor			
	Management approach disclosures	Financial report S. 34f	
409-1			Even if there is a certain risk of forced and compulsory labor in some countries in which ANDRITZ has locations, forced and compulsory labor is virtually precluded through strict internal rules and controls.
	Operations and suppliers at significant risk for incidents of forced and compulsory labor		
GRI 412: Human rights assessment			
	Management approach disclosures	Financial report p. 35	
412-2			Employees are trained on aspects of human rights as a result of the revised Code of Business Conduct and Ethics.
	Employee training on human rights policies or procedures		
GRI 414: Supplier social assessment			
	Management approach disclosures	Financial report p. 37	
414-1	New suppliers that were screened using social criteria	Financial report p. 37	
GRI 419: Socioeconomic Compliance			
	Management approach disclosures	Financial report p. 63f	
419-1	Non-compliance with laws and regulations in the social and economic area		No complaints on a groupwider level in the reporting period

CSR DATA OVERVIEW

Employees

Employees by gender, age group, type of employment and employment contract

	Absolute 2019	Absolute 2018	Percentage 2019	Percentage 2018
Men	24,733	24,303	84%	84%
Women	4,780	4,793	16%	16%
TOTAL	29,513	29,096	100%	100%
< 30 years old	3,989	4,115	14%	14%
30-50 years	16,774	16,490	57%	57%
> 50 years old	8,750	8,491	29%	29%
TOTAL	29,513	29,096	100%	100%
White-collar workers	18,011	17,399	61%	60%
Blue-collar workers	11,502	11,697	39%	40%
TOTAL	29,513	29,096	100%	100%
Full-time	28,310	27,914	96%	96%
thereof male	24,268	23,831	86%	85%
thereof female	4,042	4,083	4%	15%
Part-time	1,203	1,182	4%	4%
thereof male	453	451	38%	38%
thereof female	750	731	62%	62%
TOTAL	29,513	29,096	100%	100%
Permanent	26,244	25,801	89%	89%
thereof male	21,984	21,644	84%	84%
thereof female	4,260	4,157	16%	16%
Temporary	3,269	3,295	11%	11%
thereof male	2,737	2,672	84%	81%
thereof female	532	623	16%	19%
TOTAL	29,513	29,096	100%	100%

Employees per region

	Absolute 2019	Absolute 2018	Percentage 2019	Percentage 2018
Europe	15,845	15,900	54%	55%
North America	4,177	4,060	14%	14%
South America	3,694	3,499	12%	12%
China	3,588	3,253	12%	11%
Asia (excluding China)	2,046	2,310	7%	8%
Rest of the world	163	74	1%	0%
TOTAL	29,513	29,096	100%	100%

Personnel expenditure

(in MEUR)	2019	2018
TOTAL Expenditure on wages and salaries*	2,015.2	1,787.0

* Including wages and salaries, social security contributions, pensions, severance payments, and other social expenses.

Newly hired employees by gender and age group

	Absolute 2019	Absolute 2018	Percentage 2019	Percentage 2018
Men	3,530	3,445	85%	77%
Women	641	1,009	15%	23%
< 30 years old	1,191	1,502	29%	34%
30-50 years	2,465	2,411	59%	54%
> 50 years old	515	541	12%	12%
TOTAL	4,171	4,454	100%	100%

Fluctuation by gender and age group*

	Contracts terminated 2019	Contracts terminated 2018	Fluctuation rate 2019*	Fluctuation rate 2018*
Men	2,920	3,016	11.8%	13.3%
Women	524	517	11.0%	12.0%
< 30 years old	752	821	18.2%	20.8%
30-50 years	1,816	1,883	10.9%	12.3%
> 50 years old	876	827	10.2%	10.8%
TOTAL	3,444	3,531	11.7%	12.1%

* Calculation of fluctuation rate: contracts terminated in relation to the average number of employees. Contracts terminated include dismissals by the employer and resignation of employees.

Parental leave periods by gender

	Absolute 2019	Absolute 2018	Percentage 2019	Percentage 2018
Men	191	193	0.7%	0.8%
Women	255	221	5.3%	4.6%
TOTAL	446	414	1.5%	1.4%

* Percentage of the total workforce of the ANDRITZ GROUP

Expenditure on education and training

	2019	2018
TOTAL (in TEUR)	10,561	10,548
Average expenditure per employee (EUR)	357	362
Total training hours*	342,897	351,553

Employees appraisals

	2019	2018
Men	73%	75%
Women	67%	68%
TOTAL	72%	74%

* Percentage of the total workforce that took part in employee appraisals during the reported period

Average duration of employment by age group and region

(in years)	Europe 2019	Europe 2018	North America 2019	North America 2018	South America 2019	South America 2018	China 2019	China 2018	Asia (excl. China) 2019	Asia (excl. China) 2018
< 30 years old	4.2	4.3	2.1	2.6	2.3	2.5	3.1	2.9	2.7	2.5
30-50 years	10.3	10.9	7.4	7.7	5.8	6.6	8.5	8.9	8.5	8.0
> 50 years old	21.4	22.4	14.7	14.5	11.7	11.3	17.6	19.8	14.1	12.3
TOTAL	13.6	14.1	9.8	9.5	6.2	6.7	8.3	8.7	8.2	7.5

Accident statistics

	2019	2018
Accidents at work (with more than three days of absence)	223	210
Accident frequency (accidents with more than three days of absence per 1 million working hours)	3.8	4
Accident frequency (accidents causing one or more days absence per 1 million working hours)	6.1	6.2
Fatal accidents at work	0	1
Severity of accidents (absence periods in hours per accident)	166	155
Number of medical treatment injuries at work	1,180	1,539

Procurement

Purchasing volume

(in MEUR)	2019	2018
TOTAL	4,586.9	4,324.6
Local percentage of external purchasing volume	69.3%	72.3%

* Percentage of local purchasing volume that was bought in the respective country.

External purchasing volume by region

(in %)	2019	2018
Europe	62.7	66.4
China	14.6	13.5
North America	9.8	11.7
South America	7.3	2.3
Asia (excluding China)	4.9	5.7
Other	0.7	0.5

Environment

Overall electricity consumption*

	Unit	2019	2018
TOTAL	kWh	210,134,774	194,824,567
thereof manufacturing	%	83	84
thereof office buildings	%	17	16

* The key consumption figures are based on projected approximate values to maintain comparability, as the complete figures for the 4th quarter of 2019 were not all available before the copy deadline. Due to adjustments made to the consumption figures, the retrospective changes have resulted.

Energy consumption within the organization*

	Unit	2019	2018
Externally procured heating		34,235,862	34,305,773
District heating	kWh	34,235,862	34,305,773
Non-renewable energy carriers for heating		433,295,879	425,464,239
Light fuel oil	MJ	5,110,838**	25,506,434
Natural gas	MJ	428,185,041**	399,957,805
Non-renewable energy carriers for process heating		312,454,283	202,560,464
Oil***	MJ	827,408	353,735
Gasoline	MJ	2,331,046	3,100,909
Diesel	MJ	16,109,565	16,377,941
Diesel for emergency generator****	MJ	3,609,452	4,473,111
Natural gas	MJ	278,580,346	165,772,061
Liquid (petrol) gas	MJ	10,996,466	12,482,707

* The key consumption figures are based on projected approximate values to maintain comparability as the complete figures for the 4th quarter of 2019 were not all available before the copy deadline. Due to adjustments made to the consumption figures, the retrospective changes have resulted.

** The decrease or increase compared to the previous year is due to the fact that two major sites switched from oil to gas heating. In addition, some locations were newly integrated into the reporting.

*** Retrospective change in consumption figures 2018 as one locatoin no longer requires heavy oil to heat its presses. This also results in the increase in natural gas in 2019.

**** At two Indian locations for electricity supplys at shortages

Water consumption and disposal of waste water in manufacturing*

(in m3)	2019	2018
Surface water	14,248	36,429
Ground water*	134,978	36,883
Municipal water supplies	502,480	625,442
Rain water	9,226	9,371
TOTAL	660,932	708,125
Disposal of waste water**	607,034	630,733

* The key consumption figures are based on projected approximate values to maintain comparability as the complete figures for the 4th quarter of 2019 were not all available before the copy deadline. Due to adjustments made to the consumption figures, the retrospective changes have resulted.

** One location, which was included in the reporting for the first time, has groundwater wells that are used for process water in production

*** Water is partly used to cool the buildings or to generate steam, and in some locations also for irrigation. Therefore, the amount of wastewater discharged is less than the amount of water consumed.

Waste from manufacturing

(in kg)	2019	2018
Non-hazardous waste recycled	30,004,655	28,632,027
thereof waste metal	28,287,653	27,185,610
thereof waste glass	6,540	4,320
thereof waste paper and cardboard	813,325	645,995
thereof plastics	625,473	517,863
thereof cardboard	271,664	278,239
Non-hazardous waste incinerated	5,736,960	5,227,797
thereof waste paper and cardboard	45,753	124,489
thereof cardboard	10,789	0
thereof wood waste	3,425,951	2,905,715
thereof plastics	130,982	10,448
thereof residual waste	1,865,083	1,837,810
thereof other non-hazardous waste	125,992	120,975
thereof bulk waste	33,115	117,240
thereof polystyrene	300	3,293
thereof washing / cleaning agents residuals	98,995	107,827
Non-hazardous waste landfill	6,590,714	2,981,800
thereof waste paper and cardboard	60,581	39,933
thereof cardboard	10,789	7,433
thereof plastics	30,614	6,255
thereof residual waste	6,488,730	2,928,179
Processing of old electrical appliances and electronic devices	61,053	20,462
E-waste disposal	61,053	20,462
Hazardous waste processing	175,393	74,666
thereof lamps	40,837	33,511
thereof batteries	134,556	41,155
Hazardous waste incineration	731,399	532,088
thereof fat remover	355,708	216,516
thereof fat remover	118,863	54,830
thereof mix of solvents	256,828	260,742
Hazardous waste landfill	1,213,740	3,087,360
thereof old paints	126,392	964,733
thereof pressurized gas packaging	2,187	2,000
thereof special waster - landfill	32,939	842,588
thereof other hazardous waste	1,052,222	1,278,039
TOTAL	44,513,914	40,556,200

ANDRITZ AG

Stattegger Strasse 18
8045 Graz, Austria
investors@andritz.com

Produced in-house using firesys

Note

In order to improve readability, the present report does not contain any gender-specific wording. Any personal terms used relate to all genders equally.

Disclaimer

Certain statements contained in the 2019 annual report and in the 2019 annual financial report constitute “forward-looking statements.” These statements, which contain the words “believe”, “intend”, “expect”, and words of a similar meaning, reflect the Executive Board’s beliefs and expectations and are subject to risks and uncertainties that may cause actual results to differ materially. As a result, readers are cautioned not to place undue reliance on such forward-looking statements. The company disclaims any obligation to publicly announce the result of any revisions to the forward-looking statements made herein, except where it would be required to do so under applicable law. The 2019 annual report and the 2019 annual financial report contain assumptions and forecasts based on the information available up to the copy deadline on February 21, 2020. If the premises for these assumptions and forecasts do not occur, or risks indicated in the chapter “Risk Management” and in the management report in the 2019 annual financial report do arise, actual results may vary from the forecasts made in the 2019 annual report and in the 2019 annual financial report. Although the greatest caution was exercised in preparing data, all information related to the future is provided without guarantee.