

**ANNIN  
UJALRE  
PORT  
2017**

# Manz AG at a glance

## 2018 Financial Calendar

|                          |                                    |
|--------------------------|------------------------------------|
| <b>May 8, 2018</b>       | Publication of 2018 3-Month Report |
| <b>July 3, 2018</b>      | 2018 Annual General Meeting        |
| <b>August 14, 2018</b>   | Publication of 2018 6-Month Report |
| <b>November 13, 2018</b> | Publication of 2018 9-Month Report |

## Overview of Consolidated Net Profits

| (in million euros)                  | 2017  | 2016  | Change in % |
|-------------------------------------|-------|-------|-------------|
| Revenues                            | 325.0 | 231.0 | 40.7 %      |
| Total operating revenues            | 335.1 | 238.9 | 40.3 %      |
| EBITDA                              | 11.5  | -21.8 | n/a         |
| EBITDA margin                       | 3.4 % | n/a   | n/a         |
| EBIT                                | 1.6   | -35.9 | n/a         |
| EBIT margin                         | 0.5 % | n/a   | n/a         |
| EBT                                 | -0.1  | -39.6 | n/a         |
| Consolidated net profit             | -2.8  | -42.6 | n/a         |
| Earnings per share (in EUR)         | -0.41 | -6.22 | n/a         |
| Cash flow from operating activities | 19.5  | -16.7 | n/a         |
| Cash flow from investing activities | 10.0  | -9.0  | n/a         |
| Cash flow from financing activities | -29.2 | 46.3  | n/a         |

|                       | Dec. 31. 2017 | Dec. 31. 2016 | Change in % |
|-----------------------|---------------|---------------|-------------|
| Total assets          | 368.2         | 312.1         | 18.0 %      |
| Shareholders' equity  | 163.4         | 165.1         | -1.0 %      |
| Equity ratio (in %)   | 44.4 %        | 52.9 %        | -8.5 pp     |
| Financial liabilities | 40.3          | 54.4          | -25.9 %     |
| Liquid funds          | 72.2          | 55.7          | 29.6 %      |
| Net debt              | -31.9         | -1.3          | n/a         |

# THE YEAR 2017

**JANUARY 23**

Orders amounting to 263 million euros for turnkey lines and strategic cooperation with two leading companies in China's energy sector mark breakthrough in CIGS thin-film solar business

Preconditions for CIGS orders definitively fulfilled

**APRIL 19**

**MAY 9**

Manz AG completes sale of Manz CIGS Technology GmbH for 50 million euros

Manz AG maintains dynamic business development in the display segment with a large order

**MAY 16**

**JULY 4**

Annual General Meeting elects Dieter Manz to the Supervisory Board

Manz introduces at trade show Motek fully redesigned assembly platform LightAssembly

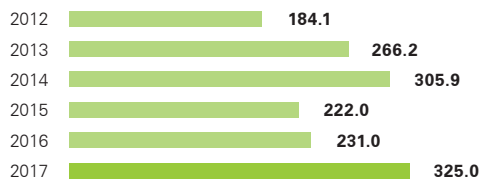
**OCTOBER 9**

**OCTOBER 26**

Personnel Change in the Supervisory Board

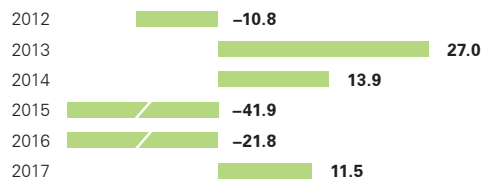
## Revenues

(in million euros)



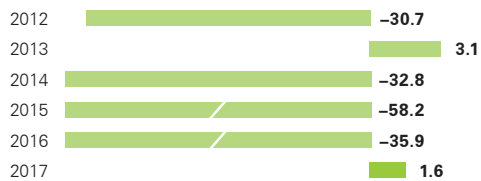
## EBITDA

(in million euros)



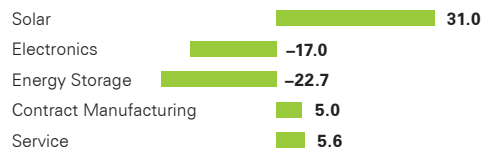
## EBIT

(in million euros)

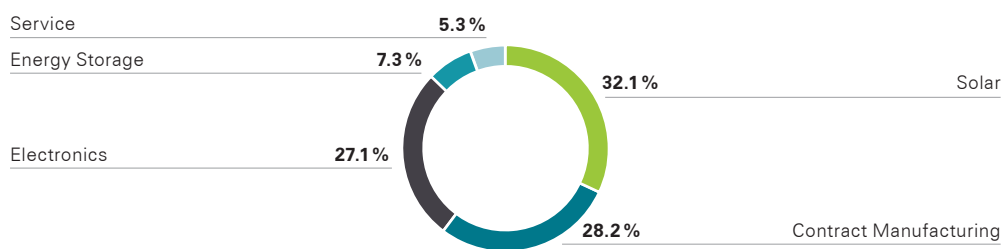


## EBIT by Business Segments 2017

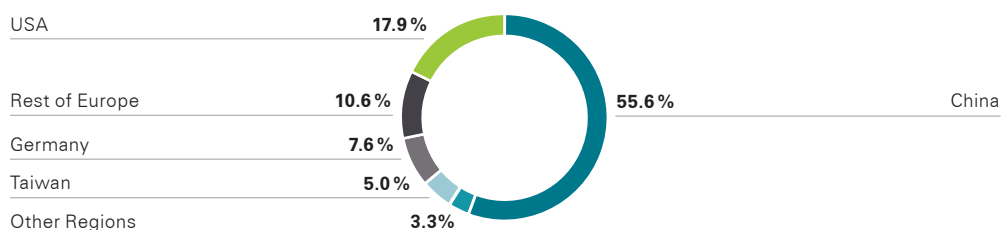
(in million euros)



## Revenues by Business Segment January 1 to December 31, 2017



## Revenue Distribution by Region January 1 to December 31, 2017



## MANZ AG MISSION STATEMENT

With our claim “passion for efficiency – efficiency through passion,” we as a high-tech equipment manufacturer make the promise to offer our customers in established and future-oriented markets and market segments innovative and economic solutions. Extensive technological know-how, a competitive product portfolio and customer proximity are the foundation of our company and enable us to recognize new industry requirements at an early stage and incorporate them into the development of our products. The Manz Group is an innovation driver for key technologies such as sustainable energy generation and stationary power storage and displays and devices for global communication needs or e-mobility. Due to our extensive expertise in automation, laser processing, image processing, metrology, wet chemistry, and roll-to-roll processes, there are application opportunities and demand for our solutions in numerous industries. In our core segments Solar, Electronics, and Energy Storage, we concentrate not only on customer-specific production solutions but also on the development, production, and marketing of standardized stand-alone machines and modules and their incorporation into complete, individual system solutions.

### **WE ACT IN A SUSTAINABLE MANNER. IN ALL AREAS. TO ALL CHALLENGES.**

Opening up opportunities. Enabling further education. Accepting social responsibility. Pushing innovation. Conserving resources.

Sustainability is more than just a slogan at Manz. We have therefore decided to put the spotlight on sustainability in this year’s Annual Report. Also, because as a large listed company from this year on, we will appropriately summarize our diverse activities around environmental issues, employee concerns, social concerns, respect for human rights and fight against corruption and bribery in a report.

The entire sustainability report can be found on our website. We provided interesting facts and backgrounds concerning the key topics for us in this Annual Report.

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**HIST  
ORY OF  
MANZ  
AG**



**1987** Company founded by  
Dieter Manz

Developed the first automation system for  
processing crystalline solar cells in a  
pilot manufacturing project **1988**

**1994** Shipped the first automation solution  
for the FPD industry to Asia

Shipped the first automation system for a completely  
automated production line for crystalline solar cells **2000**

**2005** Entered the thin-film market with equipment  
for mechanically scribing solar panels

IPO on the Entry Standard market  
of the Frankfurt Stock Exchange **2006**

**2008** Became leading supplier of systems for wet-chemical  
processes by acquiring Intech, Taiwan

Entered the market for  
lithium-ion batteries **2009**

**2012** Acquired the CIGS innovation line from Würth Solar  
Opened facility for solar and display production  
systems in Suzhou, China

Manz becomes global leading equipment supplier for  
the touch panel production  
First order from AMOLED display industry **2013**

**2014** Acquisition of mechanical engineering division of  
Kemet Electronics Italy (formerly Arcotronics) for  
enlargement of technology portfolio in Battery division

Acquisition of KLEO Halbleitertechnik GmbH,  
expansion of the technology portfolio by  
the addition of "laser direct imaging" **2015**

**2016** Shanghai Electric becomes strategic  
anchor investor of Manz AG

Start of strategic collaboration with Shanghai Electric  
and Shenhua in CIGS thin-film solar technology **2017**

TO  
OUR SHA  
AREHOL  
DERS



## LETTER FROM THE MANAGING BOARD

Dear Shareholders,

2017 proved to be a demanding year during which we got numerous things off the ground in order to once again achieve sustained profitability. Such a profound optimization process does not happen on its own but requires a high level of engagement on the part of all the staff. As such, it was not without effort that our group-wide measures, aimed at sustainably increasing our competitiveness and profitability, are beginning to show the first signs of tangible success.

With the highest level of revenue in the history of Manz and an impressive improvement in our results for 2017, following a number of years marked by losses, we are now on the right track to achieving solid business growth: we are seeing positive operative results, including the one-off effect in the Solar segment. The organizational and process improvements that have been implemented are now having an effect, as demonstrated, in particular, by our quarterly developments: for the fourth quarter of 2017, our revenue volume of 132.3 million euros allowed us to achieve a positive operating EBIT. One important contribution to this development was accomplished by our optimization program "Manz 2.0", which encompasses diverse measures aimed at boosting productivity, such as through cost optimizations and leaner organization. Additionally, we have greatly expanded our product portfolio since mid-2017 with standardized stand-alone machines and modules. This is sure to broaden our customer base and contribute to further stabilization of the business model. The investments associated with these measures in 2017 are already having positive effects as of the beginning of 2018, as demonstrated by a significant increase in orders received.

Group revenue as well as our consolidated net profit before interest and taxes (EBIT) reflect this success in the Solar, Contract Manufacturing and Service segments. Revenue increased by 40.7 % to a record level of 325.0 million euros while EBIT improved by 37.5 million euros from –35.9 million to 1.6 million euros, primarily thanks to the one-off effect in the Solar segment from the sale of Manz CIGS Technology GmbH.

In the Solar segment, we have been working at full steam to successfully complete the large-scale CIGS contract. Since the project started in mid-2017, we have managed to remain on schedule and reach all the milestones that were set. In the Electronics segment, the classic display business underwent stable development according to plan while the market for equipment needed to produce devices for the consumer electronics industry remained below our initial expectations. This development as well as the results from the Energy Storage segment are largely shaped by activities related to new customer acqui-







sition, the expansion of sales in Asia, Europe and the US as well as the development of standard products, automation and processing modules. The preliminary work needed to implement this caused revenue and EBIT to fall below their respective figures in the previous year for both segments. The Contract Manufacturing segment experienced very dynamic growth: business activities at Talus Manufacturing were expanded and new customers were acquired. The service business developed according to plan, even considering that development here was marked by shifts in the project mix compared to the previous year.

2018 has gotten off to a good start and order processing in the Solar segment is developing according to plan. In the Energy Storage and Electronics segments, the volume of incoming orders has been growing well above last year's figures, in line with our expectations. We will continue to place strong focus on our core expertise and core market sectors in these two segments. There is considerable potential for both segments in the area of e-mobility, which has already made a breakthrough in China and which is emerging in Europe and the US. Technology, expertise and experience make Manz broadly positioned in the area of previously installed pilot lines for battery production as well as in the area of components and assemblies for e-mobility applications thanks to our fully automated assembly lines. Through our targeted China strategy, we will place particular focus on this individual market, which is important for both business units. These measures will also be supported by strengthening cooperation work with our anchor shareholder, Shanghai Electric. We will continue to expand our service business, which holds potential that is still far from being fully exploited. With our objective of considerably improving productivity and, through this, profitability as well, we will also implement our optimization program Manz 2.0 throughout the group. Additionally, we have identified constant potential for us to sustainably improve our results by pursuing further organizational improvements, such as strengthening our global sales and service network, actively making use of synergies throughout the Manz Group and minimizing interfaces by implementing leaner group structures. By fusing the previously independent business units Display and PCB in Asia as of February 1, 2018, into a more competitive unit, we took yet another important step towards this ultimate aim.

Against this background, we expect to increase revenue by between 10 and 14% for financial year 2018 and also achieve a slightly positive EBIT without any special effects.

We would like to thank all of our staff members for their hard work and commitment as well as our shareholders for their continued confidence in us in 2017. We kindly ask that you continue to support us so that our company can achieve success and profitably grow into the future.

The Managing Board

Reutlingen, March, 2018



Eckhard Hörner-Marass



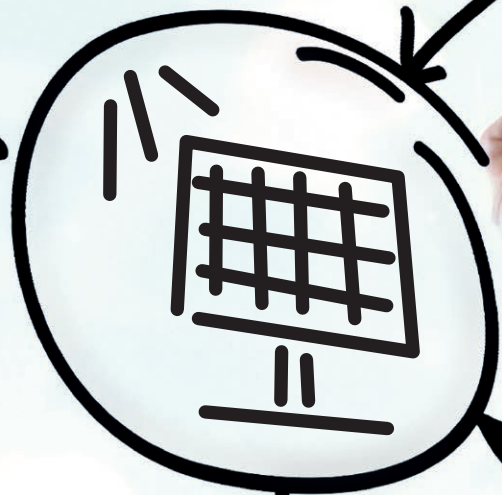
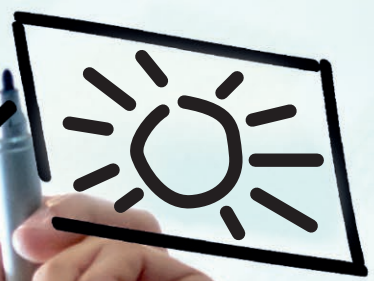
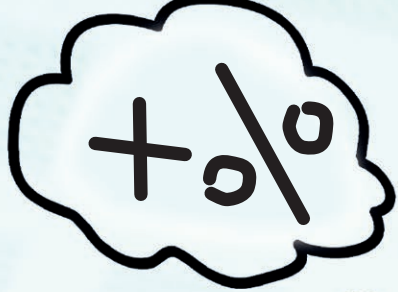
Martin Drasch

# FUTU REETHI CSPLA NNING

Sustainable action means for us: Taking responsibility. For our colleagues, partners, and customers. For society. For the environment. That is why equal opportunity and opportunities for development,

careful treatment of resources, and unconditional respect for human rights throughout the supply and production chain are the foundation of everything we do. A foundation that is not negotiable.

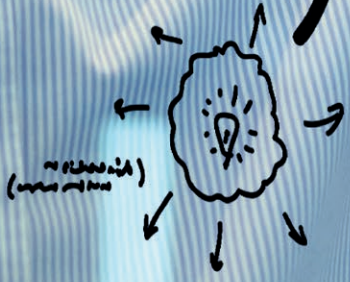
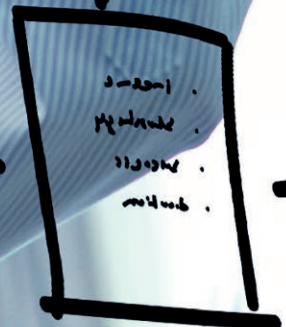
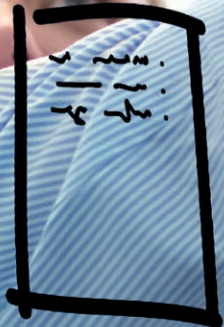
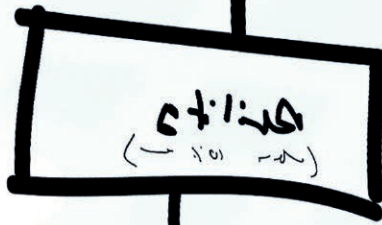




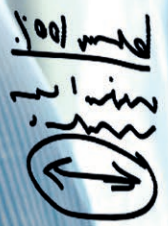
$$K + y = (x + y) - x$$
  
$$\frac{K + y}{x + y} = \frac{(x + y) - x}{x + y}$$
  
% of change

$$\frac{100 \times (100 - 10)}{100} = 90$$

$$\frac{100 + 10}{100} = 110\%$$
  
10% increase  
100%  
110%



100%  
100%  
100%



100%

100%



# Process Management

The open door culture is crucial to us in dealing with our stakeholders and shareholders. We maintain a continuous dialogue with employees, customers, suppliers or investors, analysts, and banks. We involve our employees in the further development of our company through regular surveys on current topics.

For the present and future generations, we commit ourselves to the careful use of our resources. This is an essential factor in our daily work – for example, by reducing emissions year after year and continuously increasing our share of self-produced solar power.



# Environment



# Society

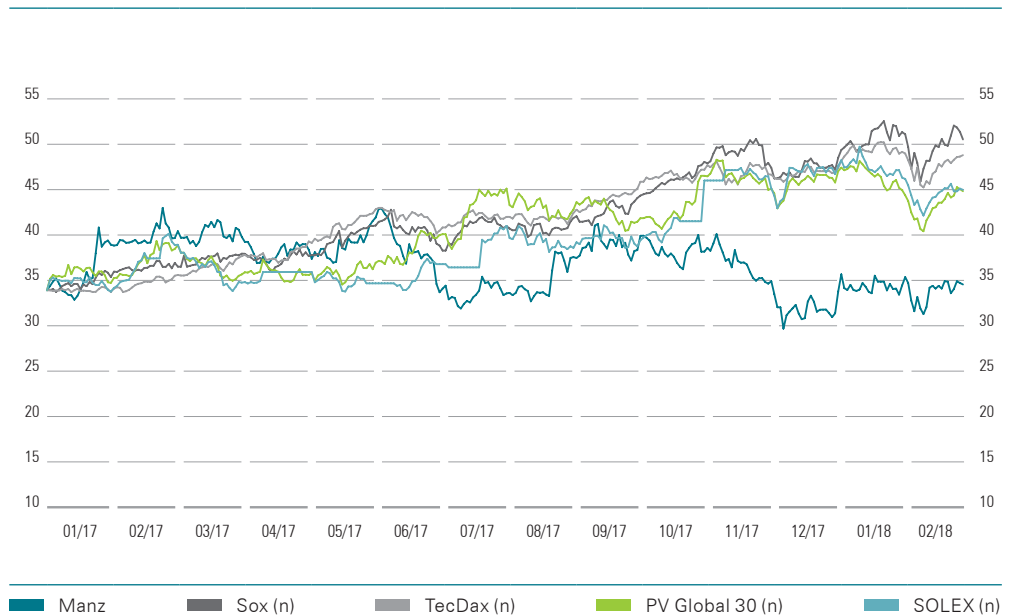
Open up opportunities where there are hardly any: that's what social responsibility means for us. In this context, we are involved in projects such as the metal workshop "Give someone a Future" in close cooperation with the Evangelical Youth Foundation and the YMCA Ethiopia.

## MANZ AG STOCK

### CHANGE IN SHARE PRICE (JANUARY 1, 2017 – FEBRUARY 28, 2018)

The Manz AG share began the 2017 fiscal year on January 2, 2017, with an opening price of 34.01 euros. The development of the share was subsequently characterized by a strong upturn, as it traded between 36 euros and 42 euros a share until the beginning of June 2017. Manz AG's share price reached a yearly high in 2017 of 42.93 euros on February 23, 2017, as well as another peak on June 2, 2017, at 42.82 euros. The stock fell below the 35 euro mark again in the further course to mid-August, approaching the 40 euro mark in the weeks up to the beginning of November. Towards the end of the year, the Manz AG share again recorded losses, closing at 31.54 euros on December 29, 2017, which corresponded to a market capitalization of approximately 244 million euros. At the beginning of 2018, the Manz share gained again and settled at a level of around 35 euros per share.

**Chart Showing Manz AG Stock (XETRA, in EUR)**





## Stock Key Data and Performance Indicators

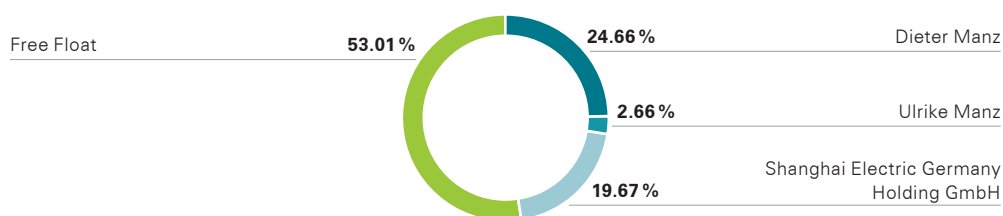
|   |  |
|---|--|
| <b>German Securities Identification Number</b>          | A0JQ5U   |
| <b>International Securities Identification Number</b>   | DE000A0JQ5U3   |
| <b>Ticker Symbol</b>                                    | M5Z  |
| <b>Stock Market Segment</b>                             | Regulated market (Prime Standard)  |
| <b>Type of Stock</b>                                    | Registered, common, no-par value bearer shares, each with a proportionate value of 1.00 EUR of capital stock |
| <b>Capital Stock</b>                                    | <b>7,744,088 EUR</b>   |
| <b>IPO</b>  | 22. September 2006   |
| <b>Opening Price</b>                                    | 19.00 EUR  |
| <b>Stock Price at the Beginning of the Fiscal Year*</b> | 34.01 EUR  |
| <b>Stock Price as to February 28, 2017*</b>             | 31.54 EUR  |
| <b>Change (in percent)</b>                              | <b>-7.3 %</b>  |
| <b>Annual High</b>                                      | 42.93 EUR  |
| <b>Annual Low</b>                                       | 29.87 EUR  |

\* Closing prices on Deutsche Börse AG's XETRA trading system

## SHAREHOLDER STRUCTURE

At 53.01% as of the reference date of Sunday, December 31, 2017, Manz AG has a large number of shares in free float and has a wide shareholder base. As of December 31, 2017, Shanghai Electric Germany Holding GmbH owns 19.67% of the shares. In addition, founder and member of the Manz AG Supervisory Board Dieter Manz and Ulrike Manz hold 24.66% and 2.66% of the company's shares, respectively.

### Shareholder Structure



## INVESTOR RELATIONS

Manz AG places a high value on an active dialog with shareholders, institutional investors, analysts, and financial journalists and maintained a constant, proactive exchange of information throughout the 2017 fiscal year. The regular and prompt publication of reports relevant to the company underscores its goal of providing comprehensive information on the company's developments. In so doing, Manz AG, with its listing in the Prime Standard of the Frankfurt Stock Exchange, fully complies with highest requirements for transparency. Manz AG strives to exceed this standard.

- In addition to the legal obligations, Manz AG participated in 6 capital market conferences and 3 roadshows in Germany and abroad. With the publication of 15 corporate news and two ad-hoc announcements, a regular offer of conference calls with webcasts for the publication of financial reports and audio replays as an online offering on the company's website, Manz AG contributes to the greatest possible transparency of its capital market communication.

In the course of fiscal year 2016, Manz AG was covered by the following institutions:

- Bankhaus Lampe
- Warburg Research
- Equinet Bank
- montega AG

## ANNUAL GENERAL MEETING

The *FILharmonie* in Filderstadt, Germany, hosted Manz AG's 2017 Annual General Meeting on Tuesday, July 4, 2017. A total of 259 shareholders attended and heard the report of the Managing Board on the development of business in the year 2016 and the outlook for the 2017 fiscal year.

Almost all the shareholders represented at the Annual General Meeting approved the meeting's agenda. In particular, the Annual General Meeting followed the recommendation of the administration and elected Dieter Manz, founder and current Managing Board Chairman of Manz AG, to the company's Supervisory Board with a majority of 99.1%. Eckhard Hörner-Marass took over Dieter Manz's responsibilities as Managing Board Chairman. A total of 57.9% of capital stock with voting rights was represented (previous year: 60.5%). Detailed voting results can be retrieved at any time from the company's website [www.manz.com](http://www.manz.com) under Investor Relations/Annual General Meeting.

## 2018 FINANCIAL CALENDAR

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|                          |                                    |
|--------------------------|------------------------------------|
| <b>May 8, 2018</b>       | Publication of 2018 3-Month Report |
| <b>July 3, 2018</b>      | 2018 Annual General Meeting        |
| <b>August 14, 2018</b>   | Publication of 2018 6-Month Report |
| <b>November 13, 2018</b> | Publication of 2018 9-Month Report |

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## REPORT FROM THE SUPERVISORY BOARD

Dear Shareholders,

During the 2017 reporting year, the Supervisory Board also advised the Executive Board on a regular basis with regard to the company's management and continuously monitored its business activities. In doing so, we meticulously carried out the duties incumbent upon us by law, the company's Articles of Incorporation, and our rules of procedure, satisfying ourselves that the Executive Board's work was legally compliant, orderly, and appropriate. The Supervisory Board discussed the organization of the company with the Executive Board. The Executive Board and the Supervisory Board have also continuously agreed on the strategic direction of the company. The Supervisory Board was involved in all significant decisions regarding the company and the Group.

The Executive Board and the Supervisory Board remained in close and intensive contact throughout the 2017 fiscal year. In this context, the Executive Board complied with its duty to provide information as set out in the law and the rules of procedure, notifying us in a regular, detailed, and timely manner in both written and oral form about all measures and events relevant to the company. The Executive Board also discussed deviations of the business performance from the plans and goals that had been set up and gave reasons for the deviations. As a result, the Supervisory Board was always kept informed - with respect to the company's business situation and performance, the company's intended business policy, and short-term, medium-term, and long-term planning, including investment, financial, and human resources planning, as well as the company's profitability and organizational measures, and the Group's overall situation. In addition, information regarding the company's risks and risk management activities was regularly provided.

The members of the Supervisory Board always had sufficient opportunity to critically discuss the reports presented and the resolutions proposed by the Executive Board, and to present its own suggestions. In particular, we intensively discussed all transactions significant to the company based on the Supervisory Board reports, and carefully examined them for plausibility. The Supervisory Board gave its approval for individual transactions to the extent that this was necessary for the Executive Board under the law, the Articles of Incorporation, or the rules of procedure.

The chairman of the Supervisory Board was in regular contact with the Executive Board at the Supervisory Board meetings and informed it about the current development of the business situation and significant business transactions.

### **Focus of Deliberations in the Supervisory Board**

The 2017 fiscal year for Manz AG was again affected by significant changes and events. The move of the company founder and CEO Dieter Manz to the Supervisory Board and the

further changes in the Management Board, as well as the orders for two CIGS thin-film solar production lines as the largest order in the history of the company, have been milestones for the company. In addition, the Executive Board pushed ahead with the further development of the company to achieve its strategic goals at all levels in various sub-projects. The business and financial situation, capacity utilization, and profitability improvement, as well as risk management, in addition to other strategic and operational issues, were regularly the focus of the Executive Board's reporting and the monitoring and advisory support provided by the Supervisory Board.

During the reporting year, the Supervisory Board held a total of five meetings, in which all members of the Supervisory Board participated. Members of the Executive Board also attended Supervisory Board meetings, insofar as these meetings did not include discussions of those members' personal matters. In addition, two written resolutions by the Supervisory Board were adopted.

The following topics were the focus of deliberations at the Supervisory Board meetings:

On January 23, 2017, the Supervisory Board approved the signing of a contract to sell the Manz CIGS Technology GmbH subsidiary to the research joint venture NICE PV Research, which was founded jointly with the Shenhua Group and the Shanghai Electric Group.

The focal points of the first annual meeting on March 28, 2017, were the annual financial statements as of December 31, 2016, and the management report, the consolidated financial statements as of December 31, 2016, and the consolidated management report, as well as the audit report of the auditor. Following a discussion with the auditor, we approved the annual and the consolidated financial statements for the 2016 fiscal year. The Executive Board also reported on the current business development, including the order backlog, and the outlook for the individual business segments in the current 2017 fiscal year. In particular, the Executive Board commented on the business situation of Talus Manufacturing, which was jointly founded with LAM Research in 2016 for the processing of equipment for the semiconductor industry, and the status of precedent conditions for placing orders for two CIGS production lines in the Solar division. In addition, the Supervisory Board, following a discussion and critical appraisal, approved medium-term planning for the 2017 to 2019 fiscal years. We also discussed capacity utilization and progress in measures to increase efficiency on the basis of management reports in line with the "Manz 2.0" restructuring and optimization program. The Executive Board, based on a risk report, explained the key risks for the Manz Group, in particular financing risks and risks associated with major CIGSfab-large orders. The Supervisory Board also discussed and approved the report of the Supervisory Board as well as the Management Leadership Statement and the corporate governance report for the fiscal year 2016. The members of the Supervisory Board, within the framework of the annual efficiency review, also discussed the results from the review of the organizational flow of the Supervisory Board' work and possible conflicts of interest. Following the final discussion, the Supervisory Board also passed resolutions on the matters of the Executive Board in connection with the departure of the current Chief





Financial Officer, Martin Hipp, as of March 31, 2017, and the appointment of the successor Gunnar Voss von Dahlen, effective from June 1, 2017, for a term of three years.

The Supervisory Board also discussed further topics at the aforementioned meeting, which were subsequently resolved by means of a written resolution of May 19, 2017. In addition to the adoption of the proposed resolutions for the forthcoming General Meeting, it decided in particular on the cancellation agreement with the previous CEO Dieter Manz and on the extension of the mandate of the future CEO Eckhard Hörner-Marass until December 31, 2019, and his amended Management Board contract. In addition, the Supervisory Board adopted the new Business Allocation Plan for the Management Board and passed resolutions on the granting of performance shares (subscription rights) on the company's shares to Executive Board member Martin Drasch and other Manz Group managers as long-term remuneration components based on the 2015 Manz Performance Share Plan.

The Executive Board's reporting on the current business performance and order intake, as well as the planning in the individual business units, was again in the foreground during the meeting on July 28, 2017. We also discussed the company's financial position in this context, in particular with regard to the development of the individual business units and their profitability. Other topics included the further development of the reporting structures in the areas of finance and controlling, as well as the selection procedure for the auditor. In addition, the Supervisory Board dealt with the adjusted strategic objectives for the Manz Group as presented by the Executive Board and the measures planned for this purpose. Finally, the Executive Board reported regularly on progress in the implementation of the restructuring and optimization measures (Manz 2.0), in particular to reduce costs.

The Executive Board again reported at the meeting on September 29, 2017, on the current business and financial position and business outlook for the second half of 2017. In this context, we discussed in detail the planning and profitability in the individual business units, as well as the respective sales activities. The committee dealt here in particular with the business units Electronic Devices and Energy Storage. The Supervisory Board also discussed the financial and liquidity position of the Manz Group and the related risk management based on the Executive Board Report. In addition, the Executive Board presented measures to simplify the Group structure, to adjust the product portfolio to expand the supply of standardized machinery, and to further develop the sales structure, in particular for the Asian markets. In addition, the legally required call for tenders for the audit, as well as the implementation of the restructuring and optimization measures (Manz 2.0), in particular for cost reduction, was once again on the agenda. The Supervisory Board also approved at this meeting the issue of other advisory mandates to the auditor with certain maximum limits. The Supervisory Board, after a thorough analysis of the previous and future attainable target levels, also determined the new targets for the share of women on the Supervisory Board and the Executive Board for the next five years. We also formed a two-member Economic Committee of the Supervisory Board with regard to the expansion of the Supervisory Board to four members.

The Executive Board reported again on the current business and financial position at the last Supervisory Board meeting on December 15, 2017. The Executive Board presented in detail the sales and earnings development, as well as the current prospects in the individual business units, taking into account the order intake. The Executive Board also explained the measures introduced to improve margins and submitted a report on liquidity and financial planning. The Executive Board approved the budget submitted by the Manz Group for fiscal year 2018 with the Supervisory Board. The Supervisory Board, along with the Executive Board, discussed in detail the objectives, framework conditions, and assumptions contained therein, as well as the resulting opportunities and planning risks. The Executive Board and the Supervisory Board further discussed strategic measures for the structural development of the Manz Group with the aim of improving competitiveness and achieving sustainable profitability. These are to be further developed by the Executive Board and discussed in detail in the Economic Committee of the Supervisory Board. The Board also reported on the status of the implementation of the measures under the "Manz 2.0" program. The Supervisory Board also discussed the selection procedure for the auditor and, on the recommendation and in accordance with the preference of the Economic Committee, decided on the proposal for the Annual General Meeting on the election of the auditor for fiscal year 2018. The dissolution or merger of a number of Group companies was likewise approved in order to streamline the group structure. We also agreed to grant power of attorney to three Manz AG managers. The Supervisory Board amended the rules of procedure for the Supervisory Board with regard to the created Economic Committee, as well as the further development of the objectives for the composition of the Supervisory Board and the competence profile of the committee. Finally, the Supervisory Board verified Manz AG's compliance with the recommendations of the German Corporate Governance Code, and, together with the Supervisory Board, adopted the statement of compliance pursuant to Section 161 of the German Stock Corporation Act (AktG).

### **Conflicts of Interest**

There are neither conflicts of interest on the part of members of the Executive Board or the Supervisory Board that must be disclosed to the Supervisory Board, nor their handling of which must be disclosed at the Annual General Meeting.

### **German Corporate Governance Code**

The Executive Board and Supervisory Board dealt in detail with the further development of corporate governance in fiscal year 2017. At the December 15, 2017, meeting, we discussed the recommendations of the German Corporate Governance Code. The Executive Board and the Supervisory Board issued a joint statement of compliance pursuant to section 161 of the German Stock Corporation Act (AktG), according to which the company complies and will comply with the recommendations in the code with only one exception. The statement of compliance from December 2017 is permanently available to the public on the Manz AG website.

### **Work in the Economic Committee of the Supervisory Board**

The Manz AG Supervisory Board existed until August 17, 2017, with the statutory minimum of three members and since then has consisted of four members. The formation of committees was not beneficial and would have made the work of the committee unnecessarily difficult due to the current membership, so no committees have been formed so far. The Supervisory Board has formed a two-member Economic Committee to improve the efficiency of its work during the course of the expansion of the Supervisory Board to four members resolved at the 2017 Annual General Meeting. This committee is to assume certain supervisory tasks and prepare the discussions and adoptions of resolutions by the Supervisory Board, particularly in the areas of accounting, auditing, finance, management matters, corporate governance, and compliance. Prof. Dr. med. Heiko Aurenz and Dieter Manz are members of the Economic Committee. It met once during the year under review and focused on the current business situation, the budget for fiscal year 2018, and strategic measures for the structural development of the Manz Group, as well as the selection process and the preferred recommendation for the auditor.

### **Annual and consolidated financial statements for the 2017 financial year**

The annual financial statements and consolidated financial statements as of December 31, 2017, prepared by the Managing Board, and the management report and Group management report for the 2017 fiscal year were audited by the company's and Group's auditor, BEST AUDIT GmbH Wirtschaftsprüfungsgesellschaft, and given an unqualified audit opinion. The separate non-financial consolidated statement (section 315b HGB) drawn up by the Managing Board for the fiscal year 2017 was reviewed by the auditor and provided with an unqualified audit opinion in regard to a limited assurance engagement.

The documents mentioned above were provided to us by the auditor. The Supervisory Board examined the annual financial statements and the management report, the consolidated financial statements and the group management report, as well as the non-financial consolidated statement (section 315b HGB), including the auditor's reports submitted to the members of the Supervisory Board prior to the meeting. The financial statements and reports shown above were discussed in detail at the meeting of the Economic Committee on March 23, 2018, as part of a preliminary examination. At the meeting of the Economic Committee and the annual accounts meeting of the Supervisory Board on March 23, 2018, the Managing Board comprehensively explained the financial statements of Manz AG and the Group in the presence of the auditor. The auditor reported on the scope, focus, and significant findings in his audit, focusing in particular on the important audit matters and the audit procedures performed during the meeting of the Economic Committee and in the annual accounts meeting of the Supervisory Board. He also provided information about his findings regarding the internal control and risk management systems in relation to the accounting process. The Economic Committee also reported to the Supervisory Board on its own audit of Manz AG's financial reporting and consolidated financial statements, its discussions with the Managing Board and the auditor, and its monitoring of the accounting process.

After examining and discussing the annual financial statements and management report, the consolidated financial statements and the group management report as well as the non-financial consolidated statement (section 315b HGB) along with the auditors' reports, the Supervisory Board approved the result of the audit conducted by the auditors. No objections are raised based on the definitive finding of the Supervisory Board review. In a resolution dated March 23, 2018, the Supervisory Board approved the annual financial statements and consolidated financial statements as of December 31, 2017. Manz AG's annual financial statements as of December 31, 2017 are thereby adopted.

### **Changes in the composition of the Executive Board and the Supervisory Board**

As already mentioned, the Chairman of the Executive Board, company founder and main shareholder Dieter Manz, resigned from the Executive Board on July 4, 2017, at his own request. Eckhard Hörner-Marass was appointed as the future Chief Executive Officer effective July 5, 2017. Furthermore, Gunnar Voss von Dahlen took up his position as Chief Financial Officer effective June 1, 2017, after the former Chief Financial Officer Martin Hipp left the Executive Board on March 31, 2017, at his own request.

At the General Meeting, Dieter Manz was elected as a member of the Supervisory Board, which was expanded to four members on the basis of the resolution of the General Meeting of July 4, 2017, which amended the Articles of Incorporation. Guoxing Yang resigned from the Supervisory Board effective September 12, 2017. Dr. Zhiming Xu was appointed as a member of the Supervisory Board on October 17, 2017, by decision of the District Court of Stuttgart.

### **Thanks and Acknowledgment**

The Supervisory Board wishes to thank the Executive Board for the constantly open and constructive collaboration in the past fiscal year. We would also like to express our gratitude to our employees for the commitment they have demonstrated during the 2017 fiscal year. And last but not least, we would like to thank you, our valued shareholders, for the trust that you have placed in us and for your willingness to shape the future of Manz AG together with us.

Reutlingen, March 23, 2018

A handwritten signature in black ink, appearing to read 'Aurenz', written in a cursive style.

Prof. Dr. Heiko Aurenz  
Chairman of the Supervisory Board

**GRO**  
**UP** MAN  
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**PORT**



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## BASIC INFORMATION ON THE GROUP

### BUSINESS MODEL AND STRATEGY

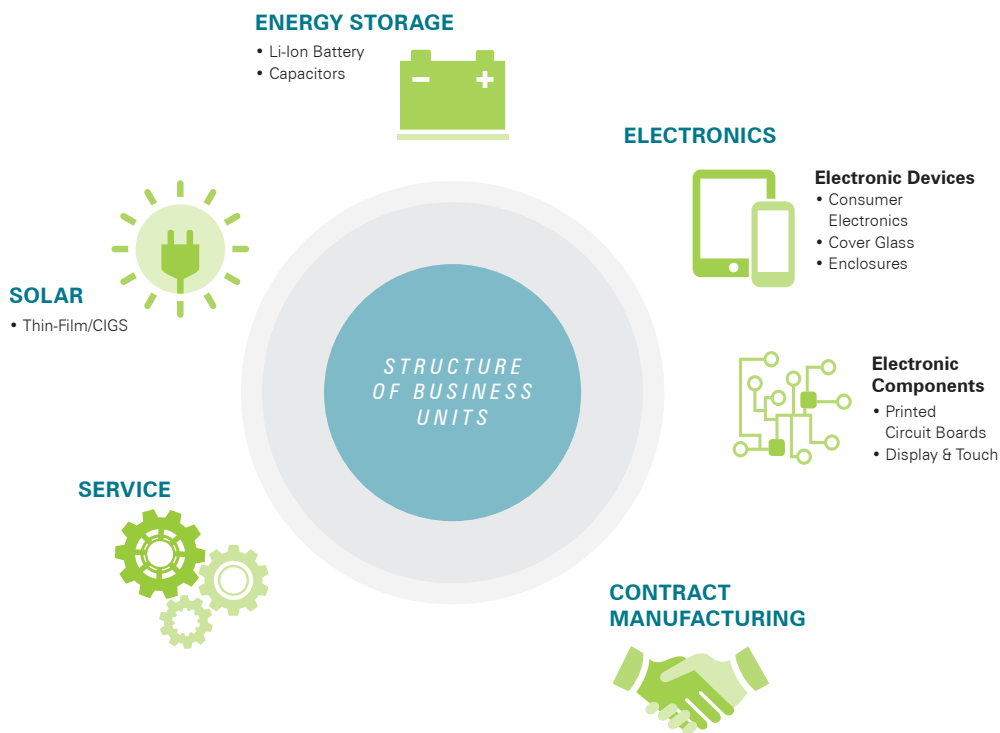
Founded in 1987, Manz AG is a global high-tech equipment manufacturing company. Its business activities comprise five segments: Solar, Electronics, Energy Storage, Contract Manufacturing, and Service. With many years of expertise in automation, laser processing, image processing and metrology, wet chemistry, and roll-to-roll processes, the company offers manufacturers and their suppliers in various industries a broad portfolio of innovative products and solutions. In addition to customer-specific production solutions, this includes standardized individual machines and modules that can be intelligently linked together to form complete, customized system solutions. The company also offers a comprehensive range of services around Manz AG's core technological competencies: From simulation and factory planning to process and prototype development, customer training, and after-sales service. Manz AG is a sought-after development partner for industry and, as such, a pioneer of future technologies.

The core of the company's strategy is to make use of the technology portfolio via a Group-wide established R&D Council across all industries and regions. In addition to a high degree of flexibility in the implementation of individual customer solutions, this cross-segment technology and know-how exchange offers the opportunity to generate and economically use internal synergies with respect to platform structures and building blocks, product portfolios as well as processes and procedures.

Manz AG maintains business relationships with manufacturers and their suppliers, particularly in the solar, consumer electronics, displays and printed circuit board, automotive and energy storage sectors. As a high-tech equipment manufacturer, Manz operates internationally and has development and production sites in Germany, Slovakia, Hungary, Italy, China, and Taiwan as well as further sales and service branches in India and the USA. Manz AG has long-standing customer relationships and a strong presence, particularly in Asia, which is a key region for the company's target industries: around 800 employees at its locations in Taiwan and China offer excellent access to this growth market. This enables Manz AG to offer engineering services "designed in Germany" at locally competitive conditions "manufactured locally".

Manz AG's business model offers a sustainable increase in competitiveness combined with profit-oriented growth. The strategic cooperation in the solar sector with Shanghai Electric Group and Shenhua Group ensures stability. Through a strong focus on the development, production and marketing of standardized single machines, modules and fully interlinked, individual system solutions and systems, as well as the rapid expansion of our global customer base, we are increasing our competitiveness and profitability. A Group-wide structured process for product identification, development and market introduction, as well as the cross-regional use of technology know-how and its standardization across

segment boundaries, significantly reduces development effort and time to market and continuously creates new unique selling points. Additional growth opportunities arise from individual development projects for customer-specific pilot lines. Here, Manz AG is a sought-after development partner throughout the industry and a pioneer for new future technologies.

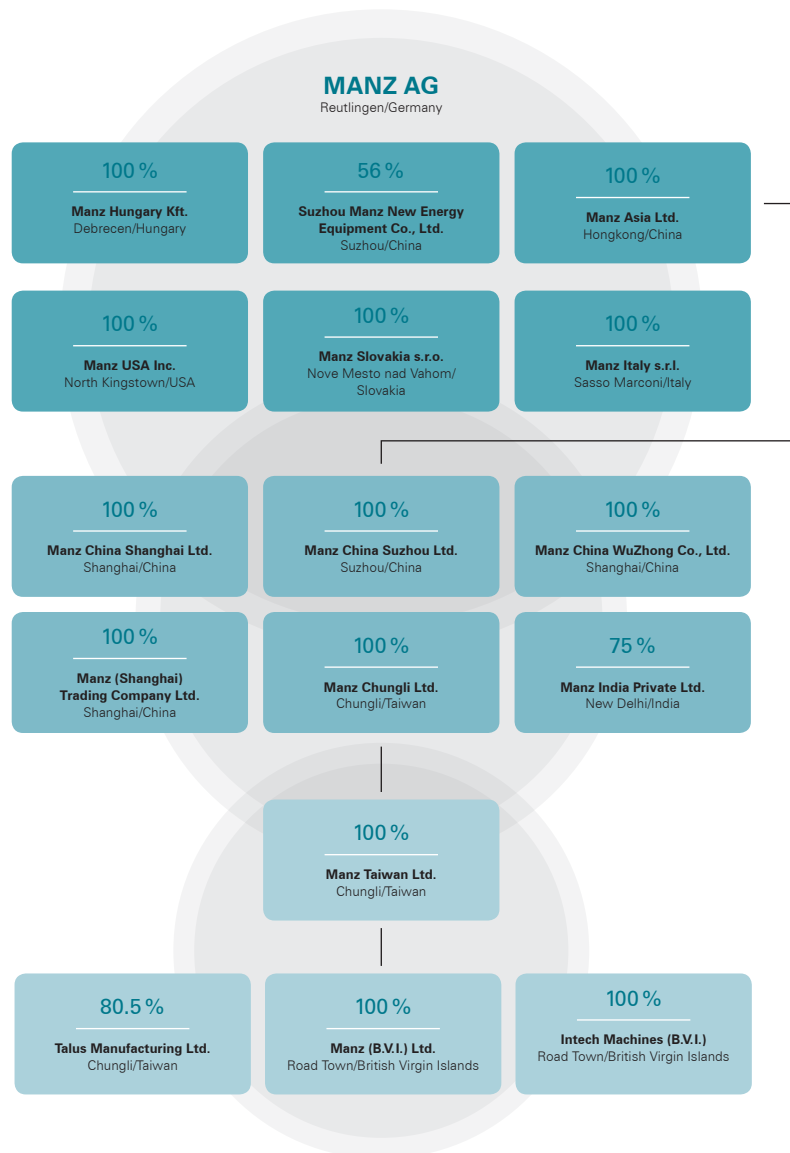


Manz AG has established the Group-wide optimization program “Manz 2.0” in order to permanently increase the company’s competitiveness and profitability through targeted organizational, process, and workflow improvements in the future. This primarily includes various measures to increase productivity along the entire value-added chain, such as cost optimization or streamlining the organization.

## GROUP STRUCTURE AND HOLDINGS

Altogether, 17 companies are included in Manz AG’s consolidated financial statements as of December 31, 2017, and are fully consolidated. As a result of the regulatory approvals granted in connection with the strategic cooperation with the Shanghai Electric Group and the Shenhua Group, NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) was sold to NICE PV Research Ltd. as the former CIGS research company of Manz AG, in which Manz AG has a 15% shareholding. Suzhou Manz New Energy Equipment Co.,Ltd., in which Manz AG holds a 56% interest, is fully consolidated as of the financial year 2017.

In addition, MVG Hungary Kft. of Debrecen, Hungary, was merged with Manz Hungary Kft. of Debrecen, Hungary.



# Locations and Employees

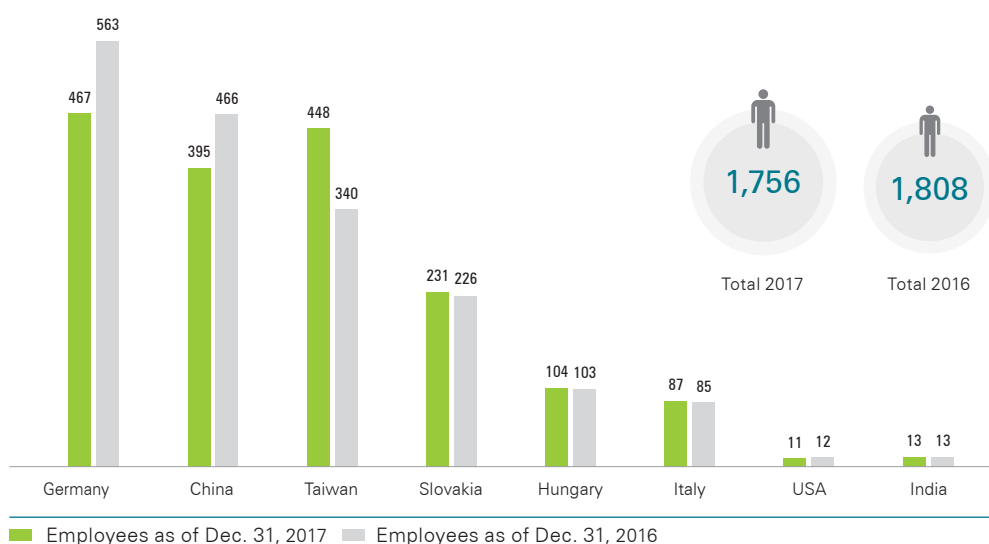


## LOCATIONS

- |  |   |   |
|--|---|---|
| 1 <b>Germany</b><br>Reutlingen, Tübingen<br>Production, Sales & Service  | 4 <b>Italy</b><br>Sasso Marconi<br>Production, Sales & Service              | 7 <b>China</b><br>Shanghai, Suzhou, Wuxi,<br>Yingkuo, Huaian, Jiangyin,<br>Ningbo, Longhua, Xiamen<br>Production, Sales & Service |
| 2 <b>Hungary</b><br>Debrecen<br>Production & Service                     | 5 <b>USA</b><br>North Kingstown, Cupertino<br>Sales & Service               | 8 <b>India</b><br>New Delhi, Kalkutta,<br>Bangalore, Hyderabad<br>Sales & Service   |
| 3 <b>Slovakia</b><br>Nove Mesto nad Vahom<br>Production, Sales & Service | 6 <b>Taiwan</b><br>Taoyuan, Taichung, Tainan<br>Production, Sales & Service |   |

## LOCATIONS AND EMPLOYEES

### Employees by country



## CONTROL SYSTEMS AND PERFORMANCE INDICATORS

Manz AG is organized, for corporate management purposes, by product and service segments at Group level and has the five business segments Solar, Electronics, Energy Storage, Contract Manufacturing, and Service. In contrast to the previous year, the Service segment is reported in the fiscal year 2017. With the introduction of the Service segment, Manz AG is responding to the increasing importance of services in the Group's overall portfolio. Revenues and earnings previously included in the Others segment will in future be distributed to the other segments. Service revenues, i. e. external installation and commissioning as well as "real" after-sales-services previously allocated to the respective segments, are now reported in the new Service segment. In order to decide on the allocation of resources and control the profitability of the divisions, they are monitored separately by management. The Managing Board is informed about business performance in the individual segments on a regular basis by means of detailed reports and regular management meetings. As a result, it is possible for the respective Managing Board to control the company in a timely manner.

### Principles and Goals of the Financial Management

The control indicators for Manz AG's corporate development are sales, earnings before interest and taxes (EBIT), and earnings before interest, taxes, depreciation, and amortization (EBITDA). Further performance indicators are the equity ratio and liquidity. In comparison to the previous year, the control system of Manz AG has not changed.

In the long term, the Managing Board has defined the following target values:

- Revenue: an annual growth of revenue averaging between 10 % and 20 % is aimed for.
- EBIT margin: a target of 10 % has been defined for the EBIT margin.
- EBITDA margin: a target of more than 15 % has been defined for the EBITDA margin.
- Equity ratio: the target corridor for shareholders' equity as a percentage of total assets is between 40 % and 60 %.
- Gearing: Manz AG has defined gearing as a ratio of net liabilities to equity before minority interests of less than 50 % as a target.

In the fiscal year 2017, the controlling variables and performance indicators developed positively to a large extent with regard to the defined target values.

### Performance indicators

| in %                             | 2017  | 2016  | 2015  | 2014  | 2013  | 2012  |
|----------------------------------|-------|-------|-------|-------|-------|-------|
| <b>Revenues (in million EUR)</b> | 325.0 | 231.0 | 222.0 | 305.9 | 266.2 | 184.1 |
| <b>EBITDA margin</b>             | 3.4   | n/a   | n/a   | 4.5   | 9.7   | n/a   |
| <b>EBIT margin</b>               | 0.5   | n/a   | n/a   | n/a   | 1.1   | n/a   |
| <b>Equity ratio</b>              | 44.4  | 52.9  | 42.8  | 55.2  | 54.8  | 52.1  |
| <b>Gearing</b>                   | -20.2 | -0.8  | 40.0  | 6.6   | 0.3   | 22.9  |

Manz AG's financial management system is organized centrally. In order to minimize risks and make use of the potential to optimize activities across the entire Group, the company concentrates decisions about subsidiaries' financing, investments, and currency hedging activities within the Group. In this context, the company follows value-based financing principles in order to secure its liquidity at all times, limit financial risks, and optimize the cost of capital. In addition, Manz strives for a well-balanced debt maturity profile. For additional information on the management of the individual financial risks, see "Reporting on Financial Instruments".

## RESEARCH AND DEVELOPMENT

As a high-tech equipment manufacturer, research and development continued to play an important role in the fiscal year 2017. With more than 500 engineers, technicians, and scientists at its development sites, Manz AG concentrates on the development of innovative production, assembly and handling technologies, standardized single machines, modules, and completely interlinked, customized system solutions and systems, as well as the inter-departmental interlinking of its competencies through the R&D Council to realize synergy effects and economies of scale.

Manz maintains numerous cooperative arrangements with well-known research institutions, universities, and colleges. The Center for Solar Energy and Hydrogen Research at Baden-Württemberg (ZSW) is Manz AG's cooperation and development partner of many years. Among other things, ZSW in Stuttgart conducts photovoltaic materials research and development for thin-film technologies and supports Manz in the further development of CIGS technology as part of its strategic cooperation with the Shanghai Electric Group and the Shenhua Group. Development activities for CIGS thin-film solar technology were significantly intensified by the cooperation with the Chinese partners and the foundation of the joint research and development company NICE PV Research Ltd. at the beginning of 2017. The aim is to accelerate the further development of CIGS technology and thus to increase the potential it offers for further increases in efficiency and for reducing manufacturing costs. In addition to the existing innovation line for CIGS thin-film solar modules at Schwäbisch Hall, a further research line with a capacity of 44 MW will therefore be built in Beijing.

ZSW is also one of 19 partners who joined forces with Manz AG at the end of 2017 within the Competence Network Lithium-ion Batteries (KLiB) to form a consortium and, in the context of the Fab4Lib project, began researching and developing processes for the mass production of lithium-ion battery cells in early 2018. Other project partners include TerraE Holding GmbH, BMZ Batterien-Montage-Zentrum GmbH, SGL CARBON GmbH, Umicore AG & Co. KG, Siemens AG, ThyssenKrupp System Engineering GmbH, and RWTH Aachen. The 18-month project is funded by the Federal Government with around 12 million euros. The aim of the project is to define a competitive production line with an annual capacity of 6 GWH and to develop the basis for this. This modular line is then to be set up where the corresponding capacity is required. Fab4Lib offers the innovative basis to completely plan a German battery cell production for mass production and to realize a cell production in a timely and cost-effective manner. At the EU level, Manz AG is also a member of the "EU Battery Alliance," a complementary initiative to the EU's "Horizon 2020" program. The aim is to close Europe's gap with the leading manufacturers of battery cells for the automotive industry and other industries in Asia. To this end, an EU funding volume of one billion euros over 10 years is under discussion, as well as the possibility to support national production projects in Europe.

Since 2017, Manz Italy is collaborating with a team of university and industry research partners in developing an innovative production line for next-generation lithium-ion batteries in Europe. The three-and-a-half-year project "IMAGE" is funded by the EU's "Horizon 2020" research and innovation program.

Manz Taiwan is collaborating with the Industrial Technology Research Institute, the largest research institute in Taiwan, in wet chemical process improvements as well as in innovative production solutions for flat panel displays.

Manz AG had a total R&D ratio of 6.0% in the reporting period (previous year: 9.7%). The significant decline is based on higher total operating revenues as well as the elimination of the high R&D expenditures in the Solar division due to the sale of NICE Solar Energy GmbH

(formerly Manz CIGS Technology GmbH) as of April 1, 2017. If we consider only capitalized development costs, the ratio of research costs to sales comes to 2.9% (previous year: 3.3%). Investments in R&D of 20.1 million euros are slightly below the prior year's level of 22.5 million euros.

Scheduled depreciation on activated development services of 2.0 million euros (previous year: 2.5 million euros) was charged in the reporting period 2017. There were no extraordinary depreciations (previous year: 0.4 million euros). The company will also continue to place a clear emphasis on R&D activities in the future. In order to provide sustained and long-term consolidation of its good technological positioning in the relevant target markets and its innovativeness, Manz AG is striving for an annual ratio of R&D to sales of 6.5% on average.



# FAIRN ESS OPP ORTUN ITIES RI GHTS

Equal opportunity and diversity are central to our self-image. As a globally active company, we are well aware of the associated challenges – and therefore take them all the more seriously. A cul-

ture of mutual trust and respect is of the utmost importance to us. We do not tolerate discrimination based on age, origin, gender, disability, world view, sexual orientation, etc.





### Diversity is our advantage

Our diversity is reflected in the composition of our employees by gender and age. Of the current 1,756 permanent employees in seven countries, one in five is female, 65 % of the total workforce is in the age group up to 40, and 35 % are 40 to 60 years old or older.

# Quota

### Work and leisure in balance

In order to promote equal opportunity and flexibility, we have introduced a work time model based on trust at our site in Reutlingen, which relies on independent, time-autonomous work by our employees. Part-time working models also help our employees find the best balance between work and private life.



### Fairness across all borders

We have introduced a Group-wide code of conduct exceeding the legal requirements against all forms of discrimination. A contact person is available at each location for all relevant matters.

# Nondiscrimination

## BUSINESS REPORT

### MACROECONOMIC ENVIRONMENT AND INDUSTRY-RELATED CONDITIONS

#### Economic Market Environment

The expansion of the global economy gained momentum in 2017. The economy remained stable in almost all major economies. According to the Kiel Institute for the World Economy (IfW), global economic output rose by 3.8% in 2017. In China, the pace of economic expansion slowed only slightly in 2017, although monetary impulses were reduced, and credit growth slowed down. According to the IfW, China's economy grew by 6.8% in 2017. The economic upswing in the euro zone continued in 2017 and economic expansion gained considerably in terms of scope and strength. Accordingly, the gross domestic product rose by 2.3% in 2017. In Germany, too, economic momentum accelerated again in 2017. The gross domestic product rose by 2.3%.

#### Mechanical Engineering Industry

The German Engineering Federation (Verband Deutscher Maschinen- und Anlagenbau VDMA) reports that mechanical engineering has returned to growth worldwide in 2017. The development of the top 5 manufacturing countries was as follows: Production growth in mechanical engineering was particularly dynamic in Japan, with price-adjusted growth of 9%. In the USA, production in mechanical engineering increased by around 6%. In Germany and Italy, machine production in 2017 surpassed the previous year's level by around 3% each, and in China, mechanical engineering grew by 2% over the previous year on a price-adjusted basis. The increase in Germany underscores the production forecast for 2017, which was adjusted in the middle of last year by plus 3% in real terms. In 2017, orders received by the mechanical engineering sector in Germany were up 8% compared to the previous year.

#### Industries in the Core Segments

According to Bloomberg New Energy Finance, global solar investments in 2017 amounted to approximately 161 billion US dollars, an increase of 18% compared to the previous year. More than half of these investments were made in China, the most important production and sales market, at around 87 billion US dollars. This is 58% more than in 2016, with an estimated installed PV capacity of 53 GW compared to 30 GW in 2016. According to the VDMA business climate survey, 90.3% of German companies report an improvement in the order situation in 2017 compared to the same period last year. Accordingly, the industry expects sales growth of 17.2%.

According to the VDMA, German manufacturers for electronics production are expecting an average sales increase of 14.3% over the previous year for 2017. At just under 30%, Germany is the largest customer for electronic engineering products, followed by Europe with 29% and then by Asia with 24%. According to Digitimes Research, the global display market is still dominated by South Korea, Taiwan, and China. In 2017, the production capacities for large-format LCD's in China, at around 75 million square meters, exceeded the capacities in South Korea (approximately 68 million square meters) and Taiwan (approximately 64 million square meters) for the first time. In the AMOLED technology for small and medium-sized display sizes, South Korea holds a dominant market position in 2017, with a global market share of over 90% of production capacity. The classic display business developed steadily and according to plan. The market for systems for the production of terminal devices with touch panel displays such as smartphones or tablet computers, on the other hand, continued to lag behind original expectations, and demand did not pick up until the end of 2017.

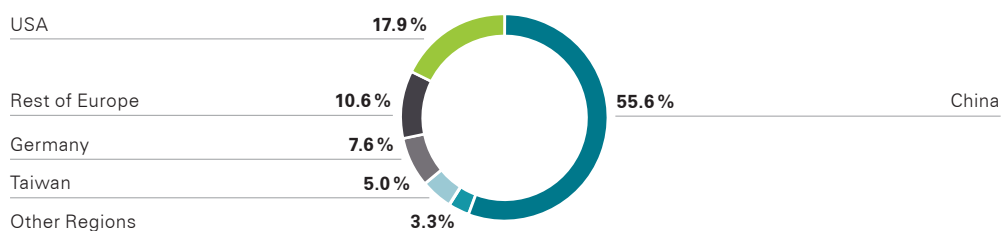
According to the VDMA, the sales growth of German machinery and equipment manufacturers for battery production will amount to around 14% in 2017 compared with the previous year. The main reasons for this development are the growing demand from the automotive industry for batteries for electro-mobility and stationary energy storage devices for the energy turnaround. The average export quota in the German battery engineering industry is generally over 80%. Asia continues to be the largest customer outside Germany, accounting for around 40%, followed by the rest of Europe with around 19% and North America with around 15%.

## ANALYSIS OF FINANCIAL POSITION, FINANCIAL PERFORMANCE AND CASH FLOWS

### Earnings Position of the Group

Revenues in the 2017 fiscal year amounted to 325.0 million euros, following 231.0 million euros in the previous year.

#### Revenue Distribution by Region January 1 to December 31, 2017



The change in inventory of finished goods and work in progress amounted to 0.7 million euros (previous year: 0.1 million euros). At 9.5 million euros, internal work capitalized was



above the prior-year level (previous year: 7.7 million euros) and is mainly due to activities for product development in the Energy Storage and Solar segments. The resulting total operating revenues are consequently 335.1 million euros (previous year: 238.9 million euros).

Other operating income was 38.6 million euros (previous year: 7.4 million euros). The extraordinary item amounting to 34.4 million euros in connection with the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) is the reason behind the increase compared to the previous year. Material costs amounted to 222.6 million euros (previous year: 138.4 million euros); the material cost ratio was 66.4% (previous year: 58.0%). This increase over the previous year is due to the implementation of material-intensive pilot projects in the Energy Storage segment, a higher material ratio of the CIGS orders and a higher contribution to revenues by the Contract Manufacturing segment, which is characterized by relatively high material expenses as a result of a high portion of purchased parts. Gross profit thus came to 151.1 million euros, compared with 107.8 million euros in the previous year. Personnel expenses totaling 74.5 million euros for the 2017 fiscal year was clearly below the prior-year level (79.1 million euros). The reason for this development is, on the one hand, the Group-wide improvement in cost control as a result of the measures implemented as part of the "Manz 2.0" optimization program and, on the other hand, the increase in productivity along the entire value-added chain as a result of the process and process optimization projects. In addition, the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) as of March 31, 2017, with 1.7 million euros, had a positive impact on personnel expenses. Compared to the previous year, the personnel expenses ratio improved significantly, to 22.2% (previous year: 33.1%). At 65.2 million euros, other operating expenses were well above the previous year (50.4 million euros). This increase is mainly due to expenses, with a volume of 26.7 million euros, in connection with the large CIGS orders. After correction of this effect to ensure comparability with the figures in 2016, other operating expenses amounted to 38.5 million euros and were thus significantly lower than in the previous year. Earnings before interest, taxes, depreciation, and amortization (EBITDA) amounted to 11.5 million euros (previous year: -21.8 million euros). At 9.9 million euros, depreciation and amortization were below the previous year's level of 14.2 million euros and include only scheduled depreciation on internal work capitalized and property, plant, and equipment. Overall, this resulted in a significant improvement over the previous year in positive earnings before interest and taxes (EBIT) of 1.6 million euros (previous year: -35.9 million euros).

Finance costs amounted to 1.8 million euros in 2017, compared with 3.7 million euros in the previous year. This improvement is mainly due to the repayment of debt capital. After deduction of taxes on income, Manz AG's consolidated net loss in the 2017 fiscal year was -2.8 million euros (previous year: -42.6 million euros). Based on a weighted average of 7,744,088 shares, this corresponds to earnings per share of -0.41 euros (previous year: -6.22 euros with 6,847,065 shares).

### Assets Position of the Group

Total assets as of December 31, 2017, increased to 368.2 million euros (December 31, 2016: 312.1 million euros) compared with the balance sheet date of 2016; equity amounted to 163.4 million euros (December 31, 2016: 165.1 million euros), resulting in an equity ratio of 44.4% (December 31, 2016: 52.9%). Non-current liabilities increased from 15.1 million euros as of December 31, 2016, to 17.2 million euros as of December 31, 2017. The increase is due to increased long-term financial liabilities of 3.3 million euros, partly to finance new developments in the Energy Storage segment at the Italian location (December 31, 2016: 2.0 million euros).

Current liabilities increased considerably, to 187.7 million euros at the end of the 2016 fiscal year (December 31, 2016: 131.9 million euros). Current financial liabilities as of December 31, 2017, amounted to 37.0 million euros (December 31, 2016: 52.4 million euros). This change is due to the repayment of a loan from the European Investment Bank (EIB) in the amount of 18.3 million euros. Trade payables as of the end of the 2017 fiscal year, at 117.5 million euros, were above the level at the end of the year 2016 as of the reference date of December 31, 2016 (47.2 million euros). The significant increase is related to the commissioning of third parties for the realization of major CIGS orders. Prepayments received increased slightly to 13.4 million euros (December 31, 2016: 9.8 million euros). The prepayments received from the CIGS order were reduced for receivables from construction contracts. As of December 31, 2017, other current provisions amounted to 5.2 million euros, compared with 7.3 million euros at the end of 2016. Other current liabilities amounted to 13.2 million euros (December 31, 2016: 14.4 million euros).

On the assets side, non-current assets, which amounted to 125.8 million euros on December 31, 2017, were on the whole at the level of the 2016 balance sheet date (121.4 million euros), whereby the composition of this item changed. Intangible assets fell to 58.7 million euros by the end of the fiscal year 2017 (December 31, 2016: 77.8 million euros), mainly as a result of the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) in the first quarter of 2017. Property, plant, and equipment as of December 31, 2017, amounted to 38.1 million euros (December 31, 2016: 39.4 million euros). Financial assets in the amount of 23.6 million euros include the 15% holding of Manz AG in NICE PV Research Ltd. As of December 31, 2017, current assets of 242.4 million euros are well above the value on the 2016 balance sheet date (190.7 million euros). In view of the positive order situation, inventories increased to 62.2 million euros as of the reference date (December 31, 2016: 49.0 million euros). At the same time, trade receivables also increased as of the reference date to 95.7 million euros (December 31, 2016: 77.7 million euros) as a result of the PoC approach in the processing of the CIGS order. The increase in liquid assets to 72.2 million euros by the end of the fiscal year 2017 (December 31, 2016: 55.7 million euros) is mainly due to the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) and the prepayment in connection with the settlement of the CIGS orders.

### Financial Position of the Group

The basis for the cash flow from operating activities, totaling 19.5 million euros, is the positive EBIT of 1.6 million euros. In addition, the positive cash flow has been supported by payments received from the CIGS orders, the improved order stock, the general improvement of the prepayment rate and the accompanying low level of additional financial commitments for net working capital. In contrast to this, asset disposals resulting from the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) amounted to over 34.4 million euros.

The cash flow from investment activities for the 2017 fiscal year totaled 10.0 million euros. This cash flow essentially consists of incoming payments totaling 48.7 million euros from the sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH), minus the deducted liquid funds for outgoing payments, totaling 24.2 million euros, for the acquisition of shares in NICE PV Research Ltd. Investments in intangible assets and fixed assets, primarily for development activities, totaled 15.2 million euros for the reporting period.

The cash flow from financing activities in the fiscal year 2017 amounted to –29.2 million euros and resulted primarily from the repayment of the loan from the European Investment Bank (EIB). If exchange rate changes are taken into account, Manz AG therefore had liquid funds totaling 72.2 million euros as of December 31, 2017 (December 31, 2016: 55.7 million euros). Unused credit lines with banks as of the balance sheet date of 2017 amounted to 20.7 million euros (December 31, 2016: 20.7 million euros).

With bank deposits of 72.2 million euros (previous year: 55.7 million euros), net financial status improved significantly from –1.3 million euros to –31.9 million euros.

Since beginning of March, 2018, Manz has obtained a new guarantee line from one credit insurer amounting to 5 million euros.

Concerning additional statements regarding liquidity and the types of financing in the Group, please refer to the liquidity and financing risks in the Risk Report.

## SEGMENT REPORTING

Regarding the explanation of differences between planned and actual figures, we refer to further information in the forecast report.

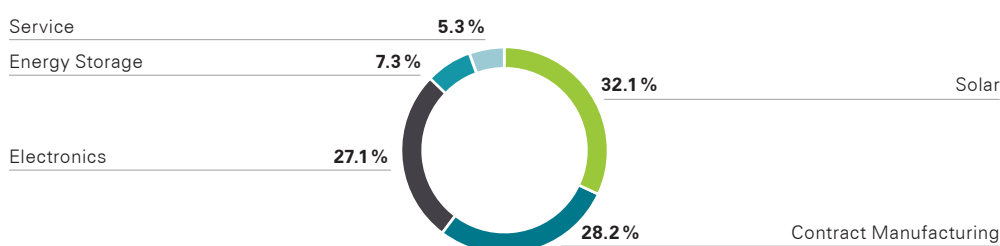
### Solar

In the Solar segment, Manz AG, in cooperation with its Chinese partners Shanghai Electric and the Shenhua Group, is concentrating on the further development of innovative production solutions for the manufacture of CIGS thin-film solar modules. CIGS thin-film



solar modules offer significantly lower production costs per watt compared to crystalline solar cells and thus a clear competitive advantage. According to Bloomberg New Energy Finance (BNEF), with a renewed high demand for 98 GW of newly installed capacity worldwide (previous year: 77 GW), costs per watt are the decisive investment criterion for solar producers and energy producers.

### Revenues by Business Segment January 1 to December 31, 2017



In the fiscal year 2017, Manz AG generated around 104.3 million euros, or 32.1 % of the Manz Group's total revenues, in the Solar segment (previous year: 21.0 million euros, or 9.1%). The year 2017 was marked by the realization of the major CIGS contracts with a total volume of 263 million euros, which Manz AG received in January 2017 as part of the strategic cooperation with Shanghai Electric and the Shenhua Group. After all official approvals had been granted in mid-April 2017, NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH), as the former CIGS research company of Manz AG, was transferred to the newly founded joint research company NICE PV Research Ltd, located in Peking, China. In return, Manz AG received the agreed purchase price at the beginning of May. The granting of the official approvals has also led to the start of operations at the second newly established company – Suzhou Manz New Energy Equipment Co.,Ltd, located in Suzhou, China. This company was founded by Manz AG, Shanghai Electric, and the Shenhua Group in order to boost the marketing of CIGS technology in China. At the end of May 2017, Manz AG had received the first advance payment of 64.3 million euros in connection with the major CIGS orders; the receipt of payment also marked the starting signal for the implementation of the orders.

The segment EBIT amounted to 31.0 million euros in 2017, compared to –13.4 million euros in the previous year. The sale of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) resulted in a positive extraordinary item affecting earnings of 34.4 million euros for the fiscal year 2017. NICE Solar Energy GmbH's (formerly Manz CIGS Technology GmbH) 3-month affiliation with the Group resulted in an EBIT effect of –2.8 million euros.

### Electronics

In the Electronics segment, Manz AG offers its customers highly efficient production, assembly and handling equipment for the manufacture of displays for LCD and OLED and AMOLED flat screens, touch sensors, printed circuit boards, and chip carriers, as well

as smartphones, tablet computers, laptops, wearables and other consumer electronics. Furthermore, the assembly solutions also offer Tier 1 and Tier 2 companies in the automotive industry economic and competitive transformation solutions from classic powertrain to future e-powertrain. Here, the company can profit from the increasing digitization and automation of production and final assembly. With its established production locations in Taiwan and China, Manz AG is active in hot spots of the target industries.

In the fiscal year 2017, Manz AG generated 87.9 million euros, or 27.1 % of the Manz Group's total revenues, in the Electronics segment (previous year: 91.1 million euros, or 39.4%). The segment EBIT amounted to –17.0 million euros in 2017, compared to –14.4 million euros in the previous year. The development of new standard products, automation and process modules as well as the expansion of sales in Asia, Europe and the USA had a negative impact on earnings, in order to market the newly developed product portfolio to a significantly broader customer base via a narrower sales network.

### **Energy Storage**

In the Energy Storage segment, Manz AG offers production, assembly and handling equipment for lithium-ion battery cells, modules, and packs, as well as for capacitors. The product portfolio covers production solutions for lithium-ion batteries and (super) capacitors in the areas of electronic end devices such as tablet PCs, mobile phones and laptops, battery-powered electrical tools and gardening devices, stationary energy storage for private households, and large photovoltaic systems, as well as e-mobility.

In the Energy Storage segment, sales amounted to 23.8 million euros, or 7.3% of total sales of the Manz Group (previous year: 46.2 million euros, or 20.0%). As a result of the low sales level, segment EBIT for 2017 amounted to –22.7 million euros after –16.1 million euros in the previous year. This segment also suffered from the development of new standard products, automation and process modules as well as the expansion of sales in Asia, Europe and the USA to market the newly developed product portfolio.

### **Contract Manufacturing**

The operating activities in the Contract Manufacturing segment are mainly carried out by Talus Manufacturing Ltd. in Taiwan. On behalf of LAM Research Corporation, equipment for the semiconductor industry is being built there and equipment of previous product generations are being modernized and reconditioned. In addition, at the location in Slovakia, Manz AG is a high-tech partner for an increasing number of customers from a wide variety of industries for equipment manufacturing, parts production, and assembly work.

In 2017, via its cooperation partner LAM Research Corporation, Manz AG was able to expand its business activities as planned. The Contract Manufacturing segment contributed 91.5 million euros, or 28.2% to the Manz Group's total revenues in 2017 (previous year: 49.4 million euros, or 21.4%). The segment EBIT amounted to 5.0 million euros in 2017, compared to 1.2 million euros in the previous year.

## Service

In the Service segment, the company combines all after-sales services such as maintenance and repair or the conversion and upgrade of machines and assemblies.

In the Service business, the company generated 17.3 million euros, or 5.3% of the Manz Group's total revenue (previous year: 23.3 euros, million or 10.1%). The segment EBIT amounted to 5.6 million euros in 2017, compared to 6.8 million euros in the previous year. The development of business in the Service segment was mainly characterized by shifts in the project mix compared with the previous year.

## OVERALL STATEMENT ON CORPORATE DEVELOPMENT 2017

In 2017, Manz AG initiated numerous measures to return to sustainable competitiveness and profitability. By means of targeted organizational, process and workflow improvements, the Managing Board was able to increase the competitiveness and profitability of the company and thus create the foundation for aligning the company to stable and profit-oriented growth in all business segments.

In addition, since mid-2017, the product portfolio has been successively expanded to include standardized individual machines and modules for the benefit-oriented satisfaction of customer needs. This will give the significantly strengthened sales team worldwide successful access to a broader customer base in all business segments.

The measures introduced are already making a significant contribution to further stabilizing the business model. This is evidenced by both the development of sales and earnings. In 2017, for example, sales rose significantly by 40.7% compared to the previous year; with a positive operating result in the fourth quarter of 2017 and a positive EBIT of 1.6 million euros including the special solar effect after several loss-making years, the Managing Board sees the company on a good path to a lastingly solid and profitable business development.

## CORPORATE GOVERNANCE

### CORPORATE GOVERNANCE STATEMENT IN ACCORDANCE WITH SECTION 289F ET SEQQ. AND SECTION 315D OF THE GERMAN COMMERCIAL CODE (HGB)

The corporate governance statement in accordance with Section 289f and 315d of the German Commercial Code (HGB) was prepared jointly for Manz AG and the Manz Group and published under the heading "Corporate Governance Statement and Corporate Governance Report of Manz AG for Fiscal Year 2017" on the company's website [www.manz.com](http://www.manz.com) in the Investor Relations section under the heading "Corporate Governance – Corporate Governance Statement."

Pursuant to Section 317 (2) sentence 6 HGB, the audit of the disclosures pursuant to Section 289f (2) and (5) as well as Section 315d of the German Commercial Code (HGB) must be limited to whether the disclosures were made.

### DISCLOSURES IN ACCORDANCE WITH SECTION 315A (1) OF THE GERMAN COMMERCIAL CODE (HGB) AND NOTES PURSUANT TO SECTION 176 (1) SENTENCE 1 OF THE GERMAN STOCK CORPORATION ACT (AKTG) ON THE DISCLOSURES IN ACCORDANCE WITH SECTION 289A(1) AND SECTION 315A(1) OF THE GERMAN COMMERCIAL CODE (HGB)

#### Composition of subscribed capital

Manz AG's subscribed capital is valued at 7,744,088.00 euros and is divided into 7,744,088 no-par value bearer shares. All shares are associated with the same rights and duties. Each share grants its owner one vote at the Annual General Meeting. Each share offers the same share of profits. This excludes treasury shares held by Manz AG, which do not entitle the company to any rights. As of December 31, 2017, the company does not hold any treasury shares. In other respects, shareholders' individual rights and duties are derived from the provisions of the German Stock Corporation Act (AktG), particularly Sections 12, 53a et seq., 118 et seq., and 186.

#### Restrictions that apply to voting rights or the transfer of shares

The Managing Board of Manz AG does not know of any agreements pertaining to restrictions on the use of voting rights or the transfer of shares.

### Shareholdings that exceed 10 % of voting rights

The Managing Board is aware, based on the received notifications of significant voting rights pursuant to Sections 21 and 22 of the German Securities Trading Act (Wertpapierhandelsgesetz, WpHG) (in the version applicable prior to January 3, 2018) or Sections 33 and 34 of the German Securities Trading Act (Wertpapierhandelsgesetz, WpHG) (in the version applicable since January 3, 2018), as well as via transactions conducted by managers themselves in accordance with Article 19 of the Market Abuse Ordinance, of the existence of the following direct or indirect shareholdings in the company's capital exceeding 10% of the voting rights:

|   | Number of Voting Rights | Percentage of Voting Rights |
|---|-------------------------|-----------------------------|
| <b>Dieter Manz, Schlaitdorf</b>   | 1,909,700               | 24.66 %                     |
| <b>People's Republic of China, acting through the State-owned Asset Supervision Commission (SASAC) of the People's Government of Shanghai, Shanghai, People's Republic of China</b> | 1,523,480               | 19.67 %                     |
| <b>Full chain of subsidiaries:</b>  |                         |                             |
| <b>Shanghai Electric (Group) Corporation</b>  |                         |                             |
| <b>Shanghai Electric Group Company Limited</b>  |                         |                             |
| <b>Shanghai Electric Hongkong Co, Limited</b>   |                         |                             |
| <b>Shanghai Electric Germany Holding GmbH (shareholder)</b>   |                         |                             |

### Shares with special rights that confer an authority to exercise control

The company does not have shares with special rights that confer an authority to exercise control.

### Type of voting right controls when employees are issued shares of company stock and do not directly exercise their control rights

Employees with holdings in the capital of Manz AG may directly exercise any control rights to which they are entitled based on the shares transferred to them in accordance with provisions of the company's Articles of Incorporation and the law.

**Legal requirements and provisions of the Articles of Incorporation regarding the appointment and dismissal of members of the Managing Board and regarding amendments to the Articles of Incorporation**

The appointment and dismissal of members of the Managing Board is governed by Sections 84 and 85 of the German Stock Corporation Act (AktG). These sections stipulate that members of the Managing Board are appointed by the Supervisory Board for a period lasting a maximum of five years. Members may be repeatedly appointed or have their term extended, in either case for another period lasting a maximum of five years. Pursuant to Article 5 of the company's Articles of Incorporation, the Managing Board may consist of one or more persons. The Supervisory Board appoints the members of the Managing Board pursuant to the provisions of the German Stock Corporation Act, and determines their number. The Supervisory Board may appoint a member as chairperson of the Managing Board. Pursuant to Section 84(3) of the German Stock Corporation Act (AktG), the Supervisory Board may revoke the appointment of a member of the Managing Board and the appointment of a chairperson of the Managing Board for good cause.

Amendments to the Articles of Incorporation are governed by Sections 133 et seqq. and 179 et seqq. of the German Stock Corporation Act (AktG). In general, amendments require a resolution passed at the Annual General Meeting. A resolution passed at the Annual General Meeting requires a majority of at least three-quarters of the capital stock represented at the time the resolution is adopted. The Articles of Incorporation may determine a different capital majority, but only a greater capital majority, for any amendment to the purpose of the company.

Pursuant to Article 16(1) of the company's Articles of Incorporation, resolutions are passed at the Annual General Meeting by a simple majority of the votes cast, unless mandatory provisions of the German Stock Corporation Act stipulate otherwise. Where the German Stock Corporation Act also stipulates that a majority of the represented capital stock is required to pass a resolution, a simple majority of the represented capital fulfills this requirement, insofar as this is legally permissible.

**Authority of the Managing Board to issue or repurchase company shares**

The Managing Board may issue new shares only on the basis of resolutions passed at the Annual General Meeting in respect of an increase in capital stock or in respect of authorized and conditional capital. Purchasing treasury shares is governed by Section 71 et seqq. of the German Stock Corporation Act (AktG) and, in certain cases, is permitted by operation of law or as a result of authorization given at the Annual General Meeting.

**Authorized capital**

On the basis of a resolution passed by the regular Annual General Meeting of July 12, 2016, pursuant to Article 3(3) of the Articles of Incorporation, the Managing Board is authorized to

increase the company's capital stock, with Supervisory Board approval, in the period until July 11, 2021, on a once-only basis or in partial contributions, up to a total of 3,872,044.00 euros through the issuance of a total of 3,872,044 new bearer shares (no-par value shares) by means of cash contributions or contributions in kind (Authorized Capital 2016).

In principle, the new shares must be offered for subscription to shareholders. The new shares can also be acquired by financial institutions specified by the Managing Board with the obligation to offer them to the shareholders for subscription (indirect subscription right). However, the Managing Board was authorized, with Supervisory Board approval, to exclude shareholders' subscription rights

- in the event of a capital increase for cash consideration, if the issue amount of the new shares is not significantly less, within the meaning of Section 203(1) and (2) and Section 186(3) Section 4 of the German Stock Corporation Act (AktG), than the stock exchange price of shares of the company of the same type at the time of establishment of the issue price, which is to be as close in time as possible to the time of issue of new shares. This authorization to suspend shareholders from preemptive subscription right applies only in cases where total shares to be issued within the scope of the capital increase apply to a proportional amount of the capital stock not exceeding 774,408.00 euros and not more than 10 % of the total equity capital at the time the authorization is exercised. The proportionate amount of capital stock of shares which are issued or sold during the period of this authorization, in direct or corresponding application of Section 186(3) sentence 4 of the German Stock Corporation Act (AktG), with exclusion of subscription rights and on the basis of other authorizations, will be offset against this maximum amount for an exclusion of subscription rights;
- in case of capital increases for contributions in kind for the purpose of acquisition of companies, parts of companies or holdings in companies, or other assets, or for entering into mergers;
- to the extent that it is necessary to give owners of warrant or convertible bonds, profit-sharing rights or profit-sharing bonds (or combinations of these instruments) issued by the company or direct or indirect affiliates of the company a subscription right to new shares to the same extent as they would have upon exercising their option or conversion right or after fulfilling their conversion obligation;
- to exclude fractional amounts from the subscription right.

The Managing Board is authorized, with Supervisory Board approval, to establish the further details of the implementation of the capital increases from the authorized capital.

**Authorization to issue partial debentures with option or conversion rights or conversion obligations, profit-sharing rights, and profit-sharing bonds (or combinations of these instruments), as well as Conditional Capital I**

At the Annual General Meeting on July 9, 2014, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue bearer warrant or convertible bonds, profit-sharing rights and/or profit-sharing bonds, or a combination of these instruments (collectively referred to as "bonds"), up to a total nominal value of 150 million euros, on one or more occasions until July 8, 2019. In addition, the Managing Board was also authorized to grant owners of warrant bonds option rights and owners of convertible bonds conversion rights for bearer shares of the company with a proportionate amount of capital stock totaling up to 1,971,223.00 euros, in accordance with the detailed terms and conditions of the warrant/convertible bonds.

The statutory subscription right is granted to the shareholders in that the bonds are underwritten by a bank or a syndicate of banks with the obligation to offer them for subscription to shareholders. If bonds are issued by one of Manz AG's subsidiaries pursuant to Section 18 of the German Stock Corporation Act (AktG), the company must ensure that the statutory subscription right is granted accordingly to shareholders of Manz AG.

However, the Managing Board is authorized, with Supervisory Board approval, to exclude fractional amounts from shareholders' subscription rights and to exclude shareholders' subscription rights to the extent that is necessary in order to give owners of already issued bonds with option rights or conversion rights and/or conversion obligations a subscription right to the extent to which they would be entitled as a shareholder after exercising their option or conversion rights or upon fulfilling their conversion obligation.

Furthermore, the Managing Board is authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights to bonds issued with an option and/or conversion right or conversion obligation, provided the Managing Board, after dutiful examination, arrives at the view that the issue price of the bonds is not significantly below their hypothetical market value calculated according to accepted and, in particular, actuarial methods. This authorization to exclude the subscription right applies to bonds issued with an option and/or conversion right or a conversion obligation, carrying an option and/or conversion right or a conversion obligation for shares with a total proportionate amount of the capital stock which may not exceed 10% of the capital stock, either at the time the authorization becomes effective or – in the event that this amount is lower – at the time this authorization is exercised. The following are offset against the aforementioned ten percent limit:

- new shares that are issued from authorized capital with the subscription right being excluded pursuant to Section 186(3) sentence 4 of the Stock Corporation Act (AktG) during the term of this authorization up to the issue, subject to the exclusion of subscription rights pursuant to Section 186(3) sentence 4 of the German Stock Corporation Act (AktG), of the bonds carrying an option and/or conversion right or conversion obligation, and



- such shares as are acquired on the basis of an authorization granted at the Annual General Meeting and are disposed of, with exclusion of the subscription right, pursuant to Section 71(1) no. 8 sentence 5, in conjunction with Section 186(3) sentence 4, of the German Stock Corporation Act (AktG) during the term of this authorization up to the issue, subject to the exclusion of subscription rights pursuant to Section 186(3) sentence 4 of the German Stock Corporation Act (AktG), of the bonds carrying an option and/or conversion right or conversion obligation.

Where profit-sharing rights or profit-sharing bonds without an option right or conversion right/obligation are issued, the Managing Board is authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights if these profit-sharing rights or profit-sharing bonds have the characteristics of a debenture; i.e., do not give rise to any membership rights in the company, do not grant a share in the liquidation proceeds, and the interest payable is not calculated on the basis of the net income for the year, net retained profit, or the dividend. Moreover, in such a case, the interest payment and the issue price of the profit-sharing rights or profit-sharing bonds must reflect current market conditions at the time of issue.

Pursuant to Article 3(4) of the Articles of Incorporation, the capital stock of the company has been conditionally increased by up to 1,971,223.00 euros through the issue of up to 1,971,223 no-par value bearer shares (Conditional Capital I). The conditional capital increase shall be carried out only to the extent that holders of option or conversion rights or those obligated to conversion as a result of warrant or convertible bonds, profit-sharing rights, or profit-sharing bonds, which are issued or guaranteed by the company or a company of the Group within the meaning of Section 18 of the German Stock Corporation Act (AktG) on the basis of an authorization resolved at the Annual General Meeting on July 9, 2014, under Agenda Item 6, exercise their option or conversion rights or, to the extent they are obligated to convert, fulfill their obligation, to the extent a cash settlement is not granted or treasury shares or shares of another stock exchange listed company are not utilized in servicing such capital increase. The new shares are issued at the option or conversion price to be determined in each case in accordance with the aforementioned authorization resolution. The new shares shall participate in profit from the beginning of the fiscal year in which they are created on the basis of the exercise of option or conversion rights or of the fulfillment of conversion obligations. The Managing Board is authorized, with Supervisory Board approval, to establish the further details of the execution of the conditional capital increase.

#### **Authorization to issue share subscription rights within the scope of the Manz Performance Share Plan 2015 as well as Conditional Capital II**

At the Annual General Meeting held on July 7, 2015, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 59,000 subscription rights ("Performance Shares") for a total of up to 118,000 shares of company stock to executives of affiliates as well as Manz's own managers below the executive level and managers of affiliates, both domestic and foreign, below the executive level on one or

more occasions through June 30, 2020. The Supervisory Board was given authorization to issue a total of up to 56,000 subscription rights ("Performance Shares") for a total of up to 112,000 shares of company stock to members of Manz's Managing Board, on one or more occasions, through June 30, 2020.

The subscription rights will be granted, arranged, and exercised in accordance with the provisions defined in the resolution passed at the Annual General Meeting on July 7, 2015.

Pursuant to Article 3(5) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to 230,000.00 euros through the issue of up to 230,000 no-par value bearer shares (Conditional Capital II). This conditional increase serves to secure the rights of the owners of subscription rights ("Performance Shares") granted as a result of the aforementioned authorization from the Annual General Meeting on July 7, 2015. The issue of shares will be in the issue amount established in the authorization resolved at the Annual General Meeting on July 7, 2015. The conditional capital increase will be carried out only to the extent subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are affected, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

#### **Authorization to issue share subscription rights within the scope of the Manz Performance Share Plan 2012 as well as Conditional Capital IV**

At the Annual General Meeting held on June 19, 2012, a resolution was passed authorizing the Managing Board, with Supervisory Board approval, to issue a total of up to 27,000 subscription rights for subscription of a total of up to 108,000 shares of company stock to executives of affiliates of the company, as well as Manz's own managers below the executive level and managers of affiliates, both domestic and foreign, below the executive level on one or more occasions through May 31, 2017. The Supervisory Board was given authorization to issue a total of up to 37,000 subscription rights for subscription of a total of up to 148,000 shares of company stock to members of Manz's Managing Board, on one or more occasions, through May 31, 2017.

The subscription rights will be granted, arranged, and exercised in accordance with the provisions defined in the resolution passed at the Annual General Meeting on Tuesday, June 19, 2012.

The authorization of June 19, 2012, was revoked by a resolution passed at the Annual General Meeting of July 7, 2015, insofar as no subscription rights had yet been issued on the basis of the authorization.

Pursuant to Article 3(7) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to 256,000.00 euros through the issue of up to 256,000

no-par value bearer shares (Conditional Capital IV). This conditional increase serves to secure the rights of the owners of subscription rights granted as a result of the aforementioned authorization from the Annual General Meeting on June 19, 2012. The issue of shares will be in the issue amount established in the authorization resolved at the Annual General Meeting on Tuesday, June 19, 2012. The conditional capital increase will be carried out only to the extent subscription rights are exercised and the company does not issue either treasury shares or a cash settlement for the purpose of fulfillment of the subscription rights. The new bearer shares will be equivalent to already issued shares of the same class with respect to their dividend entitlement. The Managing Board and, to the extent members of the Managing Board are affected, the Supervisory Board are authorized to establish the further details of the conditional capital increase and its implementation.

#### **Authorization to purchase and dispose of treasury shares**

The Annual General Meeting held on July 7, 2015, authorized the Managing Board of the company to acquire treasury shares until July 6, 2020, pursuant to Section 71(1) number 8 of the German Stock Corporation Act (AktG) with a proportional value of up to 10% of the capital stock at the time this authorization becomes effective or of the existing capital stock of the company at the time of exercise of the authorization, if such amount is lower, whereby at no point in time more than 10% of the capital stock of the company may be represented by the shares acquired on the basis of this authorization together with other shares of the company, which the company has already acquired and still possesses, or which are attributable to it pursuant to Sections 71d and 71e AktG. The provisions in Section 71(2) sentences 2 and 3 AktG must be observed.

The acquisition may take place only through the securities exchange or by means of a public purchase order and must satisfy the principle of equal treatment of shareholders (Section 53a AktG).

The Managing Board was authorized to sell the treasury shares acquired on the basis of the above authorization also in manners other than through the stock exchange or through an offer to other shareholders, under the condition that the sale is for cash and is at a price that is not significantly below the stock-exchange price, at the time of the sale, of company shares with the same features. This authorization of use is restricted to shares with a proportionate amount of capital stock that in total does not exceed 10% of the capital stock of the company, neither at the time of coming into effect of this authorization, nor – if such amount is lower – at the time of exercise of the above authorization. The maximum limit of 10% of the capital stock is reduced by the proportionate amount of the capital stock that is attributable to those shares that are issued or sold during the term of this authorization with exclusion of the subscription rights pursuant to or in accordance with Section 186(3) sentence 4 AktG. The maximum limit of 10% of the capital stock is further reduced by the proportionate amount of the capital stock represented by those shares that were to be issued in order to service bonds with option or conversion rights and/or option or conversion obligations to the extent such bonds are issued during the term of this authorization with exclusion of subscription rights in analogous application of Section 186(3) sentence 4 AktG.

The Managing Board was further authorized to transfer treasury shares acquired on the basis of the above authorization to third parties to the extent this is done for the purpose of acquiring companies, parts of companies or holdings in companies, or other assets, or for entering into mergers.

The Managing Board and – to the extent there is an obligation with respect to members of the Managing Board – the Supervisory Board were further authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfillment of the subscription rights that were or are issued in the framework of the Manz Performance Share Plan 2012 resolved at the Annual General Meeting of June 19, 2012, under item 6 of the agenda or in the framework of the Performance Share Plan 2015 resolved at the Annual General Meeting of July 7, 2015, under item 6 of the agenda.

The Managing Board was also authorized to use the treasury shares acquired on the basis of the above authorization for the purpose of fulfillment of the subscription and conversion rights that result from exercising option or conversion rights or fulfilling option or conversion obligations that have been granted or imposed within the framework of issuing convertible or warrant bonds, profit-sharing rights, or profit-sharing bonds (or combinations of these instruments) of the company or its subsidiaries.

The Managing Board was also authorized to transfer the treasury shares acquired on the basis of the above authorization to employees of the company or employees or members of executive bodies of subordinate affiliates of the company pursuant to Sections 15 et seqq. of the German Stock Corporation Act (AktG).

### **Significant company agreements that are conditional on a change of control as a result of a takeover bid**

#### **Patent and know-how license agreement with the ZSW**

There is a patent and know-how license agreement from the year 2017 between Manz AG and the Center for Solar Energy and Hydrogen Research at Baden-Württemberg (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg, ZSW), which is a foundation under German civil law and a research institution of the state of Baden-Württemberg, under which the ZSW grants Manz AG certain licenses to its patents and know-how with regard to CIS and/or CIGS technology for the manufacture of thin-film solar cells. The new patent and know-how license agreement can be terminated by ZSW for important cause if a competitor of ZSW acquires or exceeds 30% of voting rights at Manz AG in terms of section 21 et seqq. of the German Securities Trading Act (WpHG) (in the version applicable before January 3, 2018).

### **Patent and know-how license agreement with Nice Solar Energy GmbH**

There is also a patent and know-how license agreement from the year 2017 between Manz AG and Nice Solar Energy GmbH, a subsidiary of NICE PV Research Ltd. (formerly Manz CIGS Technology GmbH), which in turn is a joint venture of Shenhua Group Corporation Ltd, of Shanghai Electric Group Co. Ltd. and Manz AG, under which NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) grants Manz AG certain licenses to its patents and know-how with regard to CIS and/or CIGS technology for the manufacture of thin-film solar cells. The patent and know-how license agreement can be terminated by NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) for important cause if a third party acquires at least 30% of shares in Manz AG (either directly or indirectly), whereby the direct or indirect acquisition of shares by Shanghai Electric Group Co. Ltd. or Shenhua Group Corporation Ltd., or such an acquisition by Dieter Manz, that surpasses the threshold of 30% will not trigger the termination right.

### **Talus Manufacturing Ltd.**

There is a joint venture agreement between the subsidiary Manz Taiwan Ltd. and a leading US manufacturer of equipment for the semiconductor industry with respect to the joint venture company Talus Manufacturing Ltd. in Chungli, Taiwan, in which Manz Taiwan Ltd. holds an interest of 80.5% and the joint venture partner holds an interest of 19.5%. In the event that shares of the Manz AG are sold by its existing shareholders to third parties with the result that a person or company from the People's Republic of China directly or indirectly holds an interest of more than 30% in the company, the joint venture partner is entitled to terminate the joint venture agreement. In the event of exercise of the right to terminate, the joint venture partner has the right to acquire the interests of Manz Taiwan Ltd. in Talus Manufacturing Ltd. for payment of the value of the interest (purchase option).

Apart from the agreements mentioned above and in the section below, there are no significant company agreements that are conditional on a change of control as a result of a takeover bid.

### **Compensation agreements that were concluded by the company with members of the Managing Board or with employees in the event of a takeover bid**

The employment contracts with members of the Managing Board Eckhard Hörner-Marass and Martin Drasch provide that, in the event of a change of control, the Managing Board member is entitled to terminate the employment contract with three months' notice to the end of a calendar month and to resign from the position as member of the Managing Board with the same notice period. These rights may be exercised only within six months after the change of control has occurred.

A change of control is deemed to have taken place when the company receives notification from a notifying party in accordance with Section 21(1), sentence 1 of the German Securi-

ties Trading Act (WpHG) (in the version applicable before January 3, 2018) that the notifying party, with inclusion of the voting rights attributable to him pursuant to Section 22 of the German Securities Trading Act (WpHG) (in the version applicable before January 3, 2018), has reached or exceeded a 25% or higher share of voting rights in the company.

Martin Drasch's employment contract also provides for the following: If a change of control occurs as a result of a direct or indirect holding by Shanghai Electric Group Co., Ltd., Shanghai, People's Republic of China, in the company (the "SHE CoC"), as a result of the SHE CoC, in deviation to the rules above, the member of the Managing Board

- (a) is, up to the expiration of a calendar year from the occurrence of the SHE CoC, only entitled to terminate the employment contract on the basis of the SHE CoC with a notice period of three months to the end of a calendar month and to resign his office as a member of the Managing Board with the same notice period, if the composition of the Managing Board changes within a calendar year after the occurrence of the SHE CoC (for example, as a result of the appointment of an additional member of the Managing Board or the ending of the period of office of one of the current members of the Managing Board); the SHE CoC, along with the change in the composition of the Managing Board to this extent, is deemed to be good cause for the resignation from office. The rights under letter (a) may only be exercised within six months after the change in the composition of the Managing Board;
- (b) is entitled, after one calendar year from the commencement of the SHE-CoC, to terminate his employment contract on the basis of the SHE-CoC with a notice period of three months to the end of a calendar month, irrespective of any change in the composition of the Managing Board, and to resign from his office as a member of the Managing Board with the same notice period; in this respect, the SHE-CoC is deemed to be good cause for the resignation from office. The rights under letter (b) can in each case be exercised only up to the expiration of eighteen months following occurrence of the SHE CoC.

In the event of a termination of the employment contract pursuant to the above provisions, the member of the Managing Board shall receive a severance payment. This severance payment shall consist of the total amount of the fixed salary owed for the remaining term of the employment contract and the total amount of the cash bonus owed for the remaining term of the employment contract, whereby for the calculation of the amount, the average of the EBT return in the last fiscal year before the termination and the EBT return that is expected to be realized in the current fiscal year according to the forecast of the company are to be taken as the basis. The severance payment is limited to the amount that corresponds to 150% of the severance cap. The value of two years' annual compensation is deemed to be the severance cap. If the remaining employment term on the date the resignation becomes effective amounts to more than two years, the severance payment is reduced, insofar as it is being granted for the exceeding period, by 75% for the purposes of offsetting the severance payment with a lump sum equal to the member's expected income from

other sources after ending employment. In addition, the amounts used in the calculation of the severance payment must also be discounted at 3% p.a. each to the date on which the severance payment is due.

In other respects, the company has not entered into any agreements with members of the Managing Board or with employees that make provision for compensation payments in the event of a takeover bid.

## COMPENSATION REPORT

The following compensation report presents the basic principles of the compensation systems for the Managing Board and Supervisory Board of Manz AG, as well as the salaries earned by the members of the Managing Board and Supervisory Board in the 2017 fiscal year.

### System of compensation for the Managing Board

The compensation system for the members of the Managing Board of Manz AG applicable for the reporting year was approved at the Annual General Meeting of June 28, 2011, with a majority of 99.24% of the votes cast.

The aim of the compensation system is to compensate the members of the Managing Board commensurately according to their area of activity and responsibility, taking into account not only the personal performance of each respective Managing Board member, but also the company's overall situation and business success. The compensation structure is geared toward sustainable corporate growth.

The compensation paid to members of the Managing Board consists of fixed and variable components. When calculating the value of each element of compensation, the company differentiates between the Chairperson of the Managing Board and the other members of the Managing Board.

### Fixed elements of compensation

The fixed components of Managing Board compensation consist of a fixed monthly salary, benefits in kind, and contributions to a company retirement scheme.

The fixed salary is paid in twelve equal monthly installments. These fixed payments function as a base salary to cover Managing Board members' and their families' ongoing cost of living expenses irrespective of the company's performance.

An appropriate company car, which can also be used for private purposes, is provided to Managing Board members as a benefit in kind. In addition, the company has taken out ac-

cident insurance policies with appropriate benefits for each of the Managing Board members. These policies also cover non-work-related accidents. Furthermore, the company also covers the cost of the financial loss liability insurance (so-called D&O insurance) for each member of the Managing Board.

With Dieter Manz, former Chairman of the Managing Board, who left the Managing Board on July 4, 2017, there was a pension agreement for a lifelong pension in the event of retirement after the age of 65 or due to disability, which also provided for a life-long survivor's pension in the event of death for his wife. Manz AG transferred its obligations under the pension agreement with economic effect from July 1, 2017, to an external company assuming the pension obligation by paying a compensation amount and transferring cover assets.

With respect to Managing Board members Martin Drasch and Gunnar Voss von Dahlen, the company has undertaken to set up a pension scheme through payment of annual contributions to a provident fund. A corresponding obligation also existed towards Martin Hipp, who resigned from the Managing Board on March 31, 2017.

### **Variable elements of compensation**

#### **General**

Variable compensation comprises both an annual component calculated on the basis of the company's performance and provided in the form of a cash bonus (short-term variable compensation) and a stock-based component calculated on a multi-year basis and provided in the form of share subscription rights to be granted annually, as stipulated in the Manz Performance Share Plan 2015 (long-term variable compensation).

The variable components complement the fixed elements of compensation, serving as a specific incentive to achieve sustained corporate growth while contributing to the Managing Board members' accumulation of personal assets and financial independence. In the interest of aligning Managing Board members' variable compensation with sustained corporate growth, the fair value of the subscription rights granted as a result of the Manz Performance Share Plan 2015 (calculated using accepted actuarial methods) outweighs the annual cash bonus.

#### **Annual cash bonus**

The aim of the annual cash bonus is to allow the members of the Managing Board to participate in the company's success in a given fiscal year as a result of their own personal management performance.

The annual cash bonus is paid out after the completion of a fiscal year based on that year's EBT return. The EBT return is calculated from the ratio of earnings before taxes to revenues as set out in the consolidated financial statements prepared pursuant to IFRS. Moreover,



the cash bonus is calculated based on the fixed salary of the particular Managing Board member for the given fiscal year (fixed annual salary).

The annual cash bonus is paid out only if an EBT return of at least 4.1 % is achieved. Given an EBT return of 4.1 %, each member of the Managing Board receives a cash bonus valued at 1 % of their fixed annual salary. For every 0.1 percentage point above an EBT return of 4.1 %, the percentage of fixed salary used to calculate the cash bonus increases by one percentage point. As such, given an EBT return of 5.0 %, each member of the Managing Board would receive a cash bonus equal to 10 % of their fixed annual salary and, given an EBT return of 14 %, the cash bonus would equal 100 % of each Managing Board member's fixed annual salary. The upper limit is set at an EBT return of 20.0 %, in which case each member of the Managing Board would receive a cash bonus valued at 160 % of their fixed annual salary.

In order to calculate the ratio between the individual elements of compensation, the Supervisory Board has defined an EBT return of 10 % as the middle target of short-term variable compensation. At this middle value, the cash bonus is 60 % of the fixed annual salary.

#### **Manz Performance Share Plan 2012 and Manz Performance Share Plan 2015, as well as Share Performance Bonus**

The goal of the subscription rights to Manz shares granted in the years 2013 and 2014 pursuant to the stipulations of the Manz Performance Share Plan 2012 and those granted in the years 2015, 2016, 2017, and in the future on the basis of the Manz Performance Share Plan 2015 is to encourage the members of the Managing Board to effect a lasting increase in the company's internal and external value, effectively tying their interests to the interests of the company's shareholders as well as other stakeholders.

The Supervisory Board can – in the framework of the statutory provisions for the reasonableness of compensation – establish the number of subscription rights to be granted to the individual members of the Managing Board basically at its discretion. There is no contractual claim for the granting of performance shares.

In order to calculate the number of performance shares to issue, however, the Supervisory Board has defined a guideline to the effect that the annual long-term variable compensation in the form of performance shares (allocation value) shall normally be 50 % of the respective Managing Board member's annual total cash compensation. In this case, total cash compensation consists of the member's annual fixed salary, as well as the middle target value of the annual cash bonus equal to 60 % of the annual fixed salary. The performance shares to be granted shall be valued upon issuance through the price of the Manz share in Xetra trading on the Frankfurt Stock Exchange on the basis of an appropriate period of time at the beginning of the particular issuing period.

In the fiscal year 2017, Manz AG agreed with the new Chairman of the Managing Board, Eckhard Hörner-Marass, to grant a non-recurring profit-related bonus with a multi-year ba-

sis of assessment (Share Performance Bonus), whose payment depends on the development of the stock market value of Manz AG over several years.

Detailed information about the Manz Performance Share Plan 2012, the Manz Performance Share Plan 2015, and the subscription rights to shares of the company issued on the basis of the performance share plans, as well as about the Share Performance Bonus is included in the "Corporate Governance Statement and Corporate Governance Report of Manz AG for Fiscal Year 2017" in Section VIII., which is available on Manz AG's website at [www.manz.com](http://www.manz.com) in the "Investor Relations" section under "Corporate Governance."

#### **Severance cap in the event of early termination of Managing Board duties**

The Managing Board members' employment agreements provide that, in the event employment is terminated before the contractually stipulated end of the employment term, yet is not terminated for cause, severance payments to the Managing Board member, including fringe benefits, shall not exceed two years' annual compensation (severance cap) and that the member shall not be compensated for any more than the remainder of the employment term. The total compensation paid in the previous fiscal year and, if necessary, the anticipated total compensation for the fiscal year in which the early termination takes place will be used to calculate the severance cap.

#### **Provisions in the event of a change of control**

The employment contracts with members of the Managing Board Eckhard Hörner-Marass and Martin Drasch provide that, in the event of a change of control, the Managing Board member is entitled to terminate the employment contract with three months' notice to the end of a calendar month and to resign from the position as member of the Managing Board with the same notice period. A change of control is deemed to have taken place when the company receives notification from a notifying party in accordance with Section 21(1), sentence 1 of the German Securities Trading Act (WpHG) (in the version applicable before January 3, 2018) that the notifying party, with inclusion of the voting rights attributable to him pursuant to Section 22 of the German Securities Trading Act (WpHG) (in the version applicable before January 3, 2018), has reached or exceeded a 25% or higher share of voting rights in the company. In the event of a termination of the employment contract pursuant to the above provisions, the member of the Managing Board shall receive a severance payment.

Detailed information on the change-of-control provisions in the employment contracts of the named members of the Managing Board is contained in this Group management report in the section "Disclosures in Accordance with Section 315a(1) of the German Commercial Code (HGB) and Notes Pursuant to Section 176(1) sentence 1 of the German Stock Corporation Act (AktG) on Disclosures Pursuant to Section 289a(1) and Section 315a(1) HGB" in the subsection "Compensation agreements concluded by the company with members of the Managing Board or with employees in the event of a takeover bid."

## Compensation in the 2017 fiscal year

### Compensation of the Managing Board

#### Compensation of the Managing Board according to IFRS

The members of the Managing Board received total compensation of 2,121 thousand euros for carrying out their duties in the 2017 fiscal year (previous year: 1,852 thousand euros).

The following table provides an overview of the compensation paid to individual members of the Managing Board according to IFRS for performing their duties in the 2017 fiscal year:

#### Compensation of the Managing Board 2017

| (in EUR tsd.)<br>previous year in<br>parentheses   | Non performance-related<br>components |   | Perfor-<br>mance-<br>related<br>components<br>(short-term) | Components with<br>long-term incentive                |                                      | Total                   |
|--|---------------------------------------|---|--|---|--------------------------------------|-------------------------|
|  | Fixed<br>salary                       | Other<br>compen-<br>sation <sup>1</sup> | Cash<br>bonus  | Subscrip-<br>tion rights<br>to shares<br>(fair value) | Share<br>Perfor-<br>mance<br>Bonuses |                         |
| Eckhard<br>Hörner-Marass,<br>Managing Board<br>Chairman<br>(since July 5, 2017)<br>Chief Technology<br>Officer<br>(since Oct. 1, 2016) | 534<br>(133)                          | 10<br>(3)                               |  |   | 2                                    | <b>546</b><br>(136)     |
| Martin Drasch,<br>Chief Operations<br>Officer  | 247<br>(203)                          | 35<br>(35)                              | (100) <sup>2</sup>   | 213<br>(115)  |                                      | <b>495</b><br>(453)     |
| Gunnar Voss<br>von Dahlen,<br>Chief Finance<br>Officer<br>(since June 1, 2017)   | 140                                   | 14                                      |  |   |                                      | <b>154</b>              |
| Dieter Manz,<br>Managing Board<br>Chairman<br>(until July 4, 2017)   | 146<br>(288)                          | 487 <sup>3</sup><br>(21)                |  | 223<br>(173)  |                                      | <b>856</b><br>(482)     |
| Martin Hipp,<br>Chief Financial<br>Officer<br>(until March 31,<br>2017)  | 51<br>(201)                           | 19<br>(465) <sup>4</sup>                |  | (115)   |                                      | <b>70</b><br>(781)      |
| <b>Total</b>   | <b>1,118</b><br>(825)                 | <b>565</b><br>(524)                     | (100)  | <b>436</b><br>(403)                                   | <b>2</b>                             | <b>2,121</b><br>(1,852) |

<sup>1</sup> Particularly non-cash benefits and contributions to a company retirement scheme (provident fund)

<sup>2</sup> Individual discretionary profit-sharing bonus

<sup>3</sup> Including equalization amount Pension obligation with cover assets of 478 thousand euros

<sup>4</sup> Including promised performance from a termination agreement of 430 thousand euros

The subscription rights to shares of Manz AG on the basis of the Manz Performance Share Plan 2015 (2016 and 2017 tranches) were measured at the fair value using recognized actuarial methods.

### Compensation of the Managing Board according to the German Corporate Governance Code

The compensation of the Managing Board for the fiscal year 2017 is also disclosed on the basis of the presentation recommended by the German Corporate Governance Code in the framework of exemplary tables broken down by the benefits granted and the allocation.

The following table shows the benefits, including fringe benefits, granted to the individual members of the Managing Board for the reporting year and the previous year in accordance with the recommendations of the German Corporate Governance Code. It lists the target values for the variable compensation (payment in the event of 100% attainment of target), as well as for the achievable minimum and maximum compensation for the reporting year.

|  | <b>Eckhard Hörner-Marass</b><br>Managing Board Chairman<br>(since July 5, 2017)<br>Chief Technology Officer<br>(since Oct. 1, 2016) |                       |                       |                       | <b>Martin Drasch</b><br>Chief Operations Officer |                       |                       |                       | <b>Gunnar Voss von Dahlen</b><br>Chief Financial Officer<br>(since June 1, 2017) |                       |                       |                       |
|--|---|-----------------------|-----------------------|-----------------------|--|-----------------------|-----------------------|-----------------------|--|-----------------------|-----------------------|-----------------------|
| <b>Benefits granted (in EUR tsd.)</b>                          | <b>2016</b><br>Target   | <b>2017</b><br>Target | <b>2017</b><br>(Min.) | <b>2017</b><br>(Max.) | <b>2016</b><br>Target                            | <b>2017</b><br>Target | <b>2017</b><br>(Min.) | <b>2017</b><br>(Max.) | <b>2016</b><br>Target  | <b>2017</b><br>Target | <b>2017</b><br>(Min.) | <b>2017</b><br>(Max.) |
| Fixed compensation   | 133   | 534                   | 534                   | 534                   | 203  | 247                   | 247                   | 247                   | –  | 140                   | 140                   | 140                   |
| Fringe benefits  | 3   | 10                    | 10                    | 10                    | 23   | 23                    | 23                    | 23                    | –  | 7                     | 7                     | 7                     |
| <b>Total</b>   | <b>136</b>  | <b>544</b>            | <b>544</b>            | <b>544</b>            | <b>226</b>                                       | <b>270</b>            | <b>270</b>            | <b>270</b>            | <b>–</b>   | <b>147</b>            | <b>147</b>            | <b>147</b>            |
| Single-year variable compensation                              | 0   | 151                   | 0                     | 403                   | 115  | 142                   | 0                     | 378                   | –  | 84                    | 0                     | 224                   |
| Multiyear variable compensation                                |   |                       |                       |                       |  |                       |                       |                       |  |                       |                       |                       |
| Manz Performance Share Plan 2015 – Tranche 2016 (Term to 2020) |   |                       |                       |                       | 154  |                       |                       |                       |  |                       |                       |                       |
| Manz Performance Share Plan 2015 – Tranche 2017 (Term to 2021) |   |                       |                       |                       |  | 178                   | 178                   | 178                   |  |                       |                       |                       |
| Share Performance Bonus  |   | 113                   | 0                     | 196                   |  |                       |                       |                       |  |                       |                       |                       |
| <b>Total</b>   | <b>136</b>  | <b>808</b>            | <b>544</b>            | <b>1,143</b>          | <b>495</b>                                       | <b>590</b>            | <b>448</b>            | <b>826</b>            |  | <b>231</b>            | <b>147</b>            | <b>371</b>            |
| Pension expense <sup>1</sup>                                   | 0   | 0                     | 0                     | 0                     | 12   | 12                    | 12                    | 12                    |  | 7                     | 7                     | 7                     |
| <b>Total compensation</b>                                      | <b>136</b>  | <b>808</b>            | <b>544</b>            | <b>1,143</b>          | <b>507</b>                                       | <b>602</b>            | <b>460</b>            | <b>838</b>            |  | <b>238</b>            | <b>154</b>            | <b>378</b>            |

<sup>1</sup> For Martin Drasch and Gunnar Voss von Dahlen, contribution-oriented payments to the provident fund.

| Benefits granted<br>(in EUR tsd.)                                       | Dieter Manz<br>Managing Board Chairman<br>(until July 4, 2017) |                |                |                | Martin Hipp<br>Chief Financial Officer<br>(until March 31, 2017) |                |                |                |
|---|--|----------------|----------------|----------------|--|----------------|----------------|----------------|
|   | 2016<br>Target   | 2017<br>Target | 2017<br>(Min.) | 2017<br>(Max.) | 2016<br>Target   | 2017<br>Target | 2017<br>(Min.) | 2017<br>(Max.) |
| Fixed compensation  | 288  | 146            | 146            | 146            | 631 <sup>1</sup>   | 58             | 58             | 58             |
| Fringe benefits   | 18   | 9              | 9              | 9              | 23   | 6              | 6              | 6              |
| <b>Total</b>  | <b>306</b>   | <b>155</b>     | <b>155</b>     | <b>155</b>     | <b>654</b>   | <b>64</b>      | <b>64</b>      | <b>64</b>      |
| Single-year variable<br>compensation                                    | 173  | 88             | 0              | 236            | 115  |                |                |                |
| Multiyear variable<br>compensation                                      |  |                |                |                |  |                |                |                |
| Manz Performance<br>Share Plan 2015 –<br>Tranche 2016<br>(Term to 2020) | 230  |                |                |                | 154  |                |                |                |
| <b>Total</b>  | <b>709</b>   | <b>243</b>     | <b>155</b>     | <b>391</b>     | <b>923</b>   | <b>64</b>      | <b>64</b>      | <b>64</b>      |
| Pension expense <sup>2</sup>  | 12   | 484            | 484            | 484            | 12   | 7              | 7              | 7              |
| <b>Total compensation</b>   | <b>721</b>   | <b>727</b>     | <b>639</b>     | <b>875</b>     | <b>935</b>   | <b>71</b>      | <b>71</b>      | <b>71</b>      |

<sup>1</sup> Including promised performance from a termination agreement of 430 thousand euros.

<sup>2</sup> For Dieter Manz, service cost in accordance with IFRS and equalization amount payment pension obligation;  
for Martin Hipp, contribution-based payments to the provident fund.

The following table shows the allocation of the compensation granted to the individual members of the Managing Board in or for the reporting year and the previous year in accordance with the recommendations of the German Corporate Governance Code.

|                                   | <b>Eckhard Hörner-Marass</b><br>Managing Board Chairman<br>(since July 5, 2017)<br>Chief Technology Officer<br>(since Oct. 1, 2016) |             | <b>Martin Drasch</b><br>Chief Operations Officer |                 | <b>Gunnar Voss von Dahlen</b><br>Chief Financial Officer<br>(since June 1, 2017) |             |
|-----------------------------------|---|-------------|--|-----------------|--|-------------|
| <b>Allocation (in EUR tsd.)</b>   | <b>2017</b>   | <b>2016</b> | <b>2017</b>                                      | <b>2016</b>     | <b>2017</b>  | <b>2016</b> |
| Fixed compensation                | 534   | 133         | 247  | 203             | 140  | –           |
| Fringe benefits                   | 10  | 3           | 23   | 23              | 7  | –           |
| <b>Total</b>                      | <b>544</b>  | <b>136</b>  | <b>270</b>                                       | <b>226</b>      | <b>147</b>   | <b>–</b>    |
| Single-year variable compensation | 0   | 0           | 100 <sup>1</sup>                                 | 50 <sup>1</sup> | 0  | –           |
| Multiyear variable compensation   | –   | –           | –  | –               | –  | –           |
| Other                             | 0   | 0           | 0  | 0               | 0  | –           |
| <b>Total</b>                      | <b>544</b>  | <b>136</b>  | <b>370</b>                                       | <b>276</b>      | <b>147</b>   | <b>–</b>    |
| Pension expense <sup>2</sup>      | 0   | 0           | 12   | 12              | 7  | –           |
| <b>Total compensation</b>         | <b>544</b>  | <b>136</b>  | <b>382</b>                                       | <b>288</b>      | <b>154</b>   | <b>–</b>    |

<sup>1</sup> Individual discretionary profit-sharing bonus.

<sup>2</sup> For Martin Drasch and Gunnar Voss von Dahlen, contribution-oriented payments to the provident fund.

|  | <b>Dieter Manz</b><br>Managing Board Chairman<br>(until July 4, 2017) |             | <b>Martin Hipp</b><br>Chief Financial Officer<br>(until March 31, 2017) |             |
|--|---|-------------|---|-------------|
| <b>Allocation (in EUR tsd.)</b>                                | <b>2017</b>   | <b>2016</b> | <b>2017</b>   | <b>2016</b> |
| Fixed compensation   | 146   | 288         | 481 <sup>1</sup>  | 201         |
| Fringe benefits  | 9   | 18          | 6   | 23          |
| <b>Total</b>   | <b>155</b>  | <b>306</b>  | <b>487</b>  | <b>224</b>  |
| Single-year variable compensation                              | 0   | 0           | –   | 0           |
| Multiyear variable compensation                                |   |             |   |             |
| Manz Performance Share Plan 2012 – Tranche 2011 (Term to 2018) | 0   | 0           | 0   | 0           |
| Other  | 0   | 0           | 0   | 0           |
| <b>Total</b>   | <b>155</b>  | <b>306</b>  | <b>487</b>  | <b>224</b>  |
| Pension expense <sup>2</sup>                                   | 484   | 15          | 7   | 12          |
| <b>Total compensation</b>                                      | <b>639</b>  | <b>321</b>  | <b>494</b>  | <b>236</b>  |

<sup>1</sup> Including promised performance from a termination agreement of 430 thousand euros.

<sup>2</sup> For Dieter Manz, service cost in accordance with IFRS and equalization amount pension obligation; for Martin Hipp, contribution-based payments to the provident fund.

### Supervisory Board compensation

The compensation of the Supervisory Board is laid down in the Articles of Incorporation. The resolution stipulates that, in addition to reimbursement of expenses, each member of the Supervisory Board shall receive fixed compensation of 12,000.00 euros, payable at the end of each fiscal year. The compensation for the chairperson of the Supervisory Board is 24,000.00 euros, while, for the deputy chairperson, it is 18,000.00 euros. Supervisory Board members that are only members during a portion of a fiscal year receive proportionately less compensation. The company also reimburses Supervisory Board members for any VAT to be paid on their compensation. Moreover, the company can insure Supervisory Board members at its own expense against civil and criminal recourse in connection with the execution of their official duties; the company can also take out corresponding liability insurance against legal expenses and property loss (D&O insurance).

The following table provides an overview of the compensation paid to individual members of the Supervisory Board for performing their duties in the 2017 fiscal year (previous year's values in parentheses):

#### Compensation of the Supervisory Board 2017

| (in EUR tsd.)<br>previous year in parentheses                              | Fixed salary      |
|--|-------------------|
| Prof. Dr. Heiko Aurenz, Chairperson  | 24<br>(24)        |
| Prof. Dr.-Ing. Michael Powalla<br>Deputy chairperson since July 12, 2016   | 18<br>(15)        |
| Guoxing Yang<br>(term of office from July 12, 2016, to September 12, 2017) | 8<br>(6)          |
| Dieter Manz<br>(term of office since August 17, 2017)                      | 4                 |
| Dr. Zhiming Xu<br>(term of office since October 17, 2017)                  | 2                 |
| <b>Total</b>   | <b>57</b><br>(54) |

Furthermore, the company also covered the cost of D&O insurance for each member of the Supervisory Board.

As in the previous years, no loans or advances were granted to members of the Supervisory Board and no contingencies were entered into for their benefit.

# KNOWLEDGE EDGE EDUCATION INTEGRATION

The best possible qualification for us is the key to sustainable success. Against this background, we maintain a variety of programs and initiatives for the further qualification of our employees and

executives. We also want to establish the professional development opportunities of our global employees in a more diverse manner with the promotion of the international, internal job market.





# Dual



## Education is an investment in the future

Dual training and dual studies are very important to Manz AG. The internationalization of the dual training concept is also of great importance to us as a globally operating company. For example, at the location in Slovakia, in close cooperation with the German training department, a successful commercial/technical training structure based on the German model has been established.



# ø 21.8h

## Qualification means you never stop learning

Lifelong learning is an essential part of our sustainability strategy. We offer a broad range of training and further education measures, as well as subject-specific qualification measures, as part of the Manz Academy. In 2017, a total of 37,996.50 hours of training were held. On average, each employee received 21.8 hours of training in 2017.



## "The top tier" is also further developed

"Future Leadership@Manz" is a new program for the management level in the company, in the framework of which a common, cross-location understanding of leadership is developed.

## REPORT ON OPPORTUNITIES AND RISKS

### RISK MANAGEMENT AND INTERNAL MONITORING SYSTEM

The goal of Manz AG's risk management system is to identify possible risks early on and to initiate appropriate measures to avert any threat of damage. By availing itself of a risk management system integrated into the company's corporate governance, Manz AG is able to identify and evaluate potential risks across the Group in a timely manner and to counter them with appropriate measures. In the course of its entrepreneurial activities, i.e. in the interplay between opportunities and risks, Manz AG also consciously takes risks that are commensurate with the expected benefit from the corresponding business activity. As such, risks cannot be completely avoided, but they are minimized or transferred where possible.

The company's risk management activities are managed centrally by the risk management officer, are regularly evaluated with regard to their effectiveness and appropriateness and they are the complete responsibility of the CFO. By contrast, responsibility for monitoring risks is locally organized and falls to the division heads, managing directors and Manz AG executives, depending on the risk category and possible consequences. Regular written and oral inquiries are used to detect potential risks in all business segments and, at the same time, they also provide the opportunity to take prompt countermeasures to prevent any negative developments. An overall report is submitted to the Managing and Supervisory Boards once a year for a comprehensive assessment of the risk situation.

Risks are regularly analyzed and evaluated using a risk management system, consisting of a defined group of risk officers, fixed risk categories, and a risk classification scheme that reflects the exposure to risk and how urgently action needs to be taken. The identification and handling of risks are embedded in the corporate principles and are defined as a duty shared by all Manz AG employees. Integrating the company's entire workforce enables risks to be identified quickly and communicated to the appropriate risk officer, who must then take appropriate steps in accordance with the principles of action defined across the Group. In order to identify risks as comprehensively as possible, they are grouped into different topical areas.

The following risk categories are distinguished, in principle:

- Management
- Attacks and fraud
- Politics and the regulatory environment
- Economic environment
- Technology & competition
- Company organization and processes
- Products and projects
- Sales

- Procurement
- Human resources
- Finances

In addition to this risk management system, further activities are carried out as part of the planning process based on continuous technology and market observation to identify and mitigate risks and identify opportunities.

The effectiveness and appropriateness of our risk management system have been assessed by the public auditor. He found that the Managing Board has taken the necessary measures as stipulated in Section 91(2) of the German Stock Corporation Act, in particular with regard to the establishment of a monitoring system, and that the system is likely to identify, at an early juncture, developments that put the company's continued existence at risk. Manz AG thereby fulfills the requirements of the German Control and Transparency in Business Act (KonTraG).

#### **Risk Management System for the Accounting Process (Section 289(4) and Section 315(4) HGB)**

The goal of Manz AG's risk management system as it pertains to the accounting process is to identify and assess risks that might conflict with the compliance of the consolidated financial statements with the rules. Risk management encompasses the entirety of the organizational regulations and measures for detecting risks and for dealing with the risks associated with entrepreneurial activity. With regard to the accounting process, Manz has implemented the following structures and processes:

The CFO has total responsibility for the company's internal monitoring and risk management system as it pertains to the accounting process. All of the companies included in the consolidated financial statements are integrated via a defined management and reporting organizational structure. The separate financial statements of Manz AG and its subsidiaries are prepared in accordance with the corresponding national legislation and reconciled in financial statements in accordance with IFRS.

Group accounting guidelines ensure that recognition and measurement, which are brought into line with current external and internal developments at regular intervals, are carried out uniformly on the basis of the provisions applicable to the parent company. Furthermore, companies in the Group are prescribed report packages that they are required to prepare. The company uses the SAP tool BCS for its monthly consolidation process. In order to examine data consistency, this tool already carries out automatic plausibility checks when data is entered. Consolidation measures and monitoring of adherence to chronological and process-related requirements are carried out by members of the consolidation department at Group level. Additional monitoring activities at Group level include analyzing, and if necessary, adjusting the separate financial statements submitted by the Group's subsidiaries, in accordance with the reports submitted by the auditors. Key elements of the company's

strategy for monitoring risks in the accounting process also include the functional separation between entry, verification, and approval, as well as a clear allocation of responsibilities in the departments in question. The use of SAP as an IT financial system is another important means of systematically preventing errors. Furthermore, the company uses a dual control system at all process levels. If there are special issues of a technical or complex nature, the company also involves external experts. In addition to the internal monitoring of accounting-related processes and structures, the auditors also provide an assessment in the context of their auditing activity. Further monitoring activities include analyzing and conducting plausibility checks on transactions as well as continuously monitoring project calculations. The aforementioned structures, processes and characteristics of the internal monitoring and risk management system ensure that Manz AG's accounting processes are carried out in a uniform manner in accordance with the legal requirements, generally accepted accounting principles, international accounting standards, and the Group's internal guidelines. The Managing Board views the established systems, which are annually reviewed in respect of their potential for optimization and further development, as appropriate.

Any potential improvements identified are implemented by the Managing Board in conjunction with Manz AG's employees.

## RISK REPORT

### Industry risks

#### Macroeconomic risks

Overall and financial developments in the central sales markets of Manz AG, especially in the main sales region Asia with China as the leading economic power, can have negative effects on business development. Planned investments in the target industries of Manz AG could be postponed due to financing bottlenecks. In addition, the refinancing of listed companies via the capital market might become much more difficult. There is a risk that potential customers of Manz AG, in general, do not have the necessary capital available for investment in new equipment. Individual national subsidy programs, combined with the resulting massive fluctuations and shifts in demand, can also have a significant positive and negative impact on market development. This applies likewise for the development in the solar and electronics markets, and also in the field of lithium-ion batteries. In this negatively influenced scenario, the company might not be able to achieve its growth targets as planned. Risks of the company have been kept manageable through continuous market and competition monitoring and analysis, streamlining and thus the flexibilization of the entire corporate organization, expansion of the product portfolio, the customer base and worldwide sales capacities, the focus on clearly defined market and customer segments in the growth markets of the three core regions of Asia, Europe and the USA, increasing productivity along the entire value-added chain and the associated increase in profitability, maintaining an adequate supply of liquidity as a bolster for any potential slumps in demand.

### **Risks from increasing competition**

Existing and potential competitors, in particular Asian manufacturers, could try to gain market share in the target industries of Manz AG – above all through aggressive pricing policies, an imbalance due to local tax and subsidy policies of states and governments or import restrictions to support national companies. The manufacture of copy-cat products in the Asia region poses an additional risk. This could have a direct impact on Manz AG's sales, revenues and earnings situation and the associated development of the company's market share. In order to counteract these risks effectively, market and competitive observations are constantly carried out in the newly created "Market Intelligence" area, which are discussed in detail at quarterly international sales meetings and serve as a basis for possible countermeasures. In addition, the CRM (Customer Relationship Management) system, which has also been introduced throughout the Group, provides early indicators for the foresighted assessment of future market developments. A detailed analysis of lost projects (lost order analysis) provides timely clarity about the competitive situation. The newly introduced process of "product identification, development and market introduction" also ensures that strategically planned innovations provide the competitive edge required in the dynamic growth markets. With this, Manz AG underscores its requirement to maintain and further expand its position as the market's current technological leader through its research and development activities. In addition, Manz AG strengthens its own local presence close to its customers by means of its "Follow the market" strategy. With its local facilities in Taiwan and China, the associated production costs that are standard for the local area, and direct customer contacts, Manz counteracts any churn to domestic competitors.

### **Risks from rapid technological change and from launching new products**

To maintain its technological leading market position, research and development activities as well as an innovative portfolio of products are of key importance to the company. The industries for which Manz AG develops and manufactures its machines and equipment are characterized by rapid technological change. Through the development of the corresponding new technologies or better market knowledge or structures, competitors of Manz AG could succeed in reacting more quickly or better to changed customer requirements and thus achieve a competitive advantage over Manz AG. In these cases, the demand for the products of Manz AG could be significantly impaired. Furthermore, machines and equipment might be developed for which there is no or only slight demand in the market.

In order to control these risks, the following core processes were revised or newly introduced and consistently implemented in 2017:

#### **1. Strategy process**

In a yearly rolling process, strategy meetings between the Managing Board, the Group's first management level and selected experts from the specialist divisions are held to develop the product strategy for each business segment and for each region of the coming years.



## 2. Market and competitive analysis

In the core markets of Asia and Europe, our own market intelligence experts are employed, who constantly monitor market and competitive developments and keep abreast of current and future market and competitive developments on the basis of available studies and statistics commissioned by Manz AG. The results of this analysis are fed into the Group's annual strategic process and into the quarterly international sales meetings held for each business segment.

## 3. Product identification, development and market launch process

To prepare for the strategy meeting, the product development process is carried out annually by the local sales organizations, in close cooperation with the product managers of the business segments, in accordance with the "bottom-up principle". Local sales representatives define the need for new products for the sales area they are responsible for. In a multi-level filtering process, the most promising products are evaluated, which are then transferred to the R&D plan for the next fiscal year. After successful development, the new products are then consistently marketed in the respective target markets by means of a structured market launch process. The core objective of this process is to minimize the time between demand recognition and fulfillment ("time-to-market") and thus maximize return on investment (RoI) for the company.

## 4. Customer Relationship Management (CRM) System

The newly introduced sales management tool is used by all sales employees to manage their own sales activities. It serves to increase efficiency, effectiveness and thus success in sales. All relevant customer, market and competition data generated by the sales department are recorded there. This significantly increases both transparency and productivity in sales.

Manz AG maintains close contact with its customers, which enables the company to identify new trends early on. Proximity to customers is further enhanced by Manz AG through the continuous expansion of its associated services business, especially after-sales service. The company carefully examines possible market potentials in advance in order to be able to estimate the returns on development projects and thus deploy resources in an optimal fashion. In addition, Manz AG counters the fundamental risk associated with the development and introduction of new products for individual customers by expanding its product portfolio to include standardized machine components that can be modularly customized to modules or complete production machines at the customer's request.

### **Strategic risks**

#### **Risk from the non-fulfillment of incumbent obligations from the CIGS orders**

As part of the order placement for the CIGS production line CIGS*fab* and the CIGS research line CIGS*lab*, Manz AG has committed to fulfill an agreed percentage of the performance commitment defined in the contracts by the acceptance date. If these obligations are not

met, Shanghai Electric Group and the Shenhua Group have the right to demand subsequent performance. If Manz AG fails to deliver subsequent performance in a timely manner, the contract partners can demand the cancellation of the contracts. This could lead to the end of the collaboration with the Shanghai Electric Group and the Shenhua Group for the further development and commercialization of the CIGS thin-film technology, and could also make discussions for collaboration in other segments more difficult.

## Operating risks

### Project risks

Project risks relate primarily to non-standardized major contracts. In such contracts risks arise from potential missing of planned costs or schedules, the non-fulfillment of the acceptance criteria and order cancellations and the associated non-acceptance of contracts as well as contract risks. By expanding the share of standardized machine components in the product portfolio, which can be modularly customized to modules or entire production machines according to the customer's requirements, Manz AG intends to reduce the aforementioned project risks overall.

To this end, Manz also introduced the so-called "gate process" in 2017 as part of the Manz 2.0 optimization project and rolled it out worldwide. This regulates the entire order processing from the receipt of a request to the final acceptance of the entire project in detail and on the basis of clearly defined, IT-supported release and escalation processes.

In the offer phase, risks on the customer side are examined by means of credit checks, for example. In the "Manz radar", strategic project relevance as well as the probability of realization and order placement are examined at an early stage before valuable resources are used for bidding.

After receipt of the order, a newly structured and operationally strengthened project management system ensures that the projects are carried out technically, in terms of content, on schedule and within the available budget in a professional manner, in the interest and for the customer's success. Regular project meetings and steering committee meetings of the project team with the Managing Board for selected, particularly challenging large-scale projects serve to promote sustainability in project work.

Project risks also apply in particular with regard to the contracts concluded with the Shanghai Electric Group and the Shenhua Group for the delivery of a CIGS production line and a CIGS research line for a total order volume of 263 million euros. The project management risk is reduced by the use of external project management experts experienced in such large-scale projects, some of whom are also temporarily engaged, and by a monthly steering committee to which all members of the Managing Board also belong. The financial risk is reduced through agreed advance payments made by the principals to Manz AG.



### Dependency on key accounts

In the Solar business segment, the Manz Group generated sales of 102.6 million euros or 32% of the Group's total sales in fiscal year 2017 due to the award of major CIGS orders. Since 2017, Manz has set itself the goal of creating a balanced order structure. Standard machines, such as "small lines" and large projects (> 10 million euros for individual orders) are to be balanced in order to reduce the risk of negative effects in the event of declining development of major customers by broadening the customer base and diversifying project volumes and the business model in markets, regions and products and services throughout the Group.

### Technological risks

In the company's opinion, the Manz Group has a leading market position in the key technologies of its portfolio. In its Electronics and Energy Storage segments in particular, however, it is in competition with a number of other companies and is therefore dependent on the continuous development of new and forward-looking production systems. Due to the recent volatility in the development of the Manz Group, there is a risk that in the future it will not be possible for the company, or will not be possible uniformly in segments, to carry out in particular development projects that are costly in terms of time and money in the scope necessary to maintain its leading role and thus its market position. Manz endeavors to reduce this risk by continually improving the Group's financial performance and cash flows, while also strengthening the business with standard products and system solutions from intelligent product building blocks.

### Personnel risks

Qualified and motivated managers and employees are crucially important to the success of a high-tech equipment manufacturer. The loss of executives or employees in key positions could have a negative impact on the company's growth and thus impair its financial position, financial performance and cash flows. At the same time, there is also a risk that the company will not be able to hire a sufficient number of new, suitable executives or additional employees. With measures such as the introduction of trust-based working hours or employee financial participation in the success of the company, Manz is creating a positive working environment that results in low staff turnover. As a listed company, Manz AG enjoys greater attention from potential employees than do unlisted companies. As a result, in economically successful phases Manz AG is able to increase attention and its attractiveness as a potential employer extremely quickly. In economically challenging times, the comparably great public interest under the aspect of personnel recruiting is not always to the advantage of the company, its attractiveness as a potential employer suffering rapidly under the negative headlines. A positive aspect of being listed on the stock market, however, is that it allows the company to increase employee loyalty by issuing share options, thus allowing employees to share in the company's profits.

## Financial risks

### Liquidity and financing risks

Since the financial crisis and stricter equity capital requirements directives, the lending practice of banks is more restrictive. At the same time, growth and the development of new technologies demand large investments. The demand for financing therefore is also rising in the industry. The non-satisfactory business developments of the recent fiscal years and the forecast uncertainties that existed until the contract was concluded with the Shanghai Electric Group and the Shenhua Group in January 2017 led to a much higher liquidity risk in 2016. After Manz AG successfully implemented a capital increase in May 2016, the company received net issue proceeds of approximately 75.6 million euros, some of which were used to repay the loans provided by the company's German lenders. No new agreements were arranged with the German bank lenders, so that the parent company Manz AG does not have any bank credit lines at the moment. Discussions with financial institutions regarding the procurement of new credit lines are currently on-going. The subsidiaries in Slovakia, Hungary, Italy, China and Taiwan are financed primarily through short-term overdraft facilities and, to a lesser extent, long-term loans. On the reference date December 31, 2017, the Manz Group had available unchanged credit lines of 20.7 million euros.

### Currency risks

Manz AG's currency risks arise from operating activities. In fiscal years 2017, these activities mainly related to transactions of the Asian subsidiaries in EUR from the sale of machinery. The transaction-based currency risk is hedged, fundamentally where necessary. Through forward exchange transactions. Furthermore, currency exchange risk is generally also reduced by distributing the production locations over several countries (natural hedging).

## OPPORTUNITIES REPORT

### Industry focus with competitive and customer-oriented, innovative technology portfolio

With many years of proven expertise in automation, laser processing, image processing, measurement technology, wet chemistry and roll-to-roll processes, Manz AG is active in the Solar, Electronics and Energy Storage segments. Manz AG offers a broad portfolio of innovative products to producers and their suppliers in a wide variety of industries worldwide. This ranges from customer-specifically developed production equipment to machines that can be intelligently linked together to form complete, individual system solutions based on a modular system. Manz AG also offers services around its core technological competencies. Thanks to diversification into technologies, industries and regions, the stability and production capacities required for sustainable corporate development can be adjusted in

line with the investment cycles of individual sectors and used efficiently by other business segments within the Group. At the same time, the diversified business model offers the opportunity to participate in the growth potential of several dynamic target markets. At the same time, this diversified business model gives the company the opportunity to benefit from the growth potential of several dynamic target markets. From a stable base, Manz is thus giving the entire business model entrepreneurial flexibility to react quickly to market developments and take profitable advantage of growth opportunities.

**Sustainable competitiveness and profitability through profitable growth, supported by the optimization program “Manz 2.0”.**

The diversified business model of Manz AG forms the basis for sustainable stability with constant, profitable growth. With the aim of significantly expanding the customer base and thus further stabilizing the business model, Manz AG decided in mid-2017 for all business segments to significantly increase the share of modular machines in the product portfolio in addition to customized solutions. These modular machines can be intelligently linked to complete, individual system solutions based on a modular system. This step significantly reduces development risks (RoI), effort and duration and thus significantly shortens the amortization of development efforts. At the same time, this creates synergy effects for Manz AG which increase the productivity of the entire Group. In 2016, the optimization program “Manz 2.0” was also established to continuously increase the company’s competitiveness and profitability in numerous individual projects by means of targeted organizational, process and process improvements as well as the introduction of corresponding tools.

These include issues such as the development of a new corporate mission statement in the form of a vision and mission, the establishment of an annual revolving strategy development process to define short-, medium- and long-term goals, the introduction of a comprehensive, integrated corporate planning system, which is worked out according to the bottom-up principle and finalized in planning-defense discussions with the Managing Board and the central divisions, and which will result in the annual planning for the following financial year, as well as in a 3-year draft planning.

In a new goal-setting process, the individual goals of the individual management levels are derived cascade-like from the approved corporate planning. In a monthly management meeting between the Managing Board and the first management level, the sustainable management of the entire Group companies and business segments is ensured.

Cost-conscious corporate management is of great importance. To this end, we are systematically working on further cost optimization measures, including improved cost transparency, cost responsibility and control, strategic product development, improved sales structures, optimized capacity utilization at all locations, more efficient internal processes, and the significant streamlining of internal structures. With its diversified business model and the measures taken, Manz AG considers itself to be on the right track to remain competitive and profitable in the long term.

### **Cross-segment technology implementation offers synergy effects and flexibility**

By establishing a Group-wide R&D Council, Manz AG ensures that duplicate and parallel developments are avoided and synergy potentials between the individual business segments are maximized. This Council, which meets on a regular basis, is used by all business segments heads and product managers to define and prioritize the R&D projects resulting from the product development process for the next period and propose them to the strategy meeting for approval. In developing its production systems, Manz AG carries out an active technology transfer between the relevant target industries. By utilizing its extensive technological expertise across different industries, Manz AG can offer its customers innovative production solutions. As a result, Manz plays a key role in minimizing the production costs of the final products manufactured on Manz equipment and decisively helps develop economical production processes. At the same time, the synergy effects achieved between the business segments contribute to increasing the company's productivity and profitability of the Manz Group. The utilization of the synergy effects between the individual business segments also enables Manz AG's business model to be flexible in its response to new growth trends and sales markets with additional revenue and earnings potential while, at the same time, making it possible to permanently reinforce the company's good competitive position as an innovation leader.

### **Strategic cooperation with Chinese partners opens up growth potential**

By entering into the strategic cooperation agreement between Manz AG, Shanghai Electric Group and the Shenhua Group in early 2017, the partners have formed a unique strategic cooperation in the CIGS thin-film sector, in which they have bundled their individual strengths. The Shenhua Group is one of the largest energy producers in China. Shanghai Electric is China's leading supplier of equipment to generate electricity, with extensive experience in the renewable energies sector. As a high-tech equipment manufacturer and PV pioneer, Manz AG has contributed its CIGS technology with a record efficiency of 22.6% on standardized laboratory cell formats and its unique CIGS research team to this cooperation. By bundling their complementary expertise in energy production, the large production of equipment and products, and the globally leading cutting-edge technology, the partners form a strong alliance for the further development and commercialization of the CIGS technology in China and around the world. Manz AG is directly and indirectly the exclusive distribution partner.

As part of the strategic cooperation agreement, Manz AG also received two major CIGS contracts with a total volume of 263 million euros. At the end of May 2017, Manz AG received the first payment in connection with the major CIGS orders, which was also the starting signal for the realization of the orders. Since then, Manz AG has been on schedule and reached all agreed milestones. In the meantime, Manz AG has received about 50% of the agreed total payments in several installments. In view of the positive project progress to date, the opportunities for follow-up orders are good from the Managing Board's point of view. The cooperation with anchor investor Shanghai Electric generally provides Manz

AG with improved access to the Chinese market, but also provides further medium-term growth potential in the Energy Storage business segment, with the future trends electromobility and stationary energy storage, and also in the strategic Electronics business segment.

### Assessment and Summary of the Risk and Opportunity Situation

Manz AG's risk portfolio consists of both risks that can be influenced by the Group as well as risks that cannot be influenced, such as economic activity and sector development. The company regularly monitors and analyses the situation in these areas. Risks that can be controlled are strategic, operational and financial risks that are to be identified at an early stage by means of appropriate monitoring and control systems and thus avoided. Significant risks, which are likely to have serious negative effects on the ecological or social aspects, cannot be deduced from the business model of Manz AG.

The identification of risks and opportunities has not given rise to any risks that could jeopardize the continued existence of the Group or its individual subsidiaries for the fiscal year 2017 or for the forecast period 2018. Risks that endanger the continued existence of the company are defined as risks with a probability of occurrence of more than 60% and a financial impact on EBIT of more than 20 million euros.

In the fiscal year 2017, the overall risk and opportunity situation improved slightly compared with the previous year. The risks and their possible effects are known, as are the measures to be introduced. The resulting opportunities are analyzed and, if necessary, implementation is initiated. Risks that arise in the fiscal year 2018 (forecast period) and could lead to deviations in the development of sales and/or earnings are evaluated as follows:

| Risks   | Impact<br>low/medium/high | Likelihood of<br>occurrence<br>low/high |
|---|---------------------------|---|
| <b>Industry risks</b>   |                           |   |
| Macroeconomic risks   | ■ ■                       | ■                                       |
| Risks from increasing competition   | ■ ■                       | ■ ■ ■                                   |
| Risks from rapid technological change and from launching new products       | ■ ■                       | ■ ■ ■                                   |
| <b>Strategic risks</b>  |                           |   |
| Risk from the non-fulfillment of incumbent obligations from the CIGS orders | ■ ■ ■                     | ■                                       |
| <b>Operating risks</b>  |                           |   |
| Project risks   | ■ ■ ■                     | ■                                       |
| Dependency on key accounts/individual large orders                          | ■ ■ ■                     | ■                                       |
| Technological risks   | ■                         | ■                                       |
| Personnel risks   | ■ ■                       | ■ ■ ■                                   |
| <b>Financial risks</b>  |                           |   |
| Liquidity and financing risks   | ■ ■ ■                     | ■                                       |
| Currency risks  | ■ ■                       | ■                                       |

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| Opportunities  | Impact<br><small>low/medium/high</small> | Likelihood of<br>occurrence<br><small>low/high</small> |
|--|--|--|
| <b>Comprehensive innovative technology portfolio</b>       | ■ ■ ■                                    | ■ ■ ■  |
| <b>Stability through the Manz 2.0 optimization program</b> | ■ ■ ■                                    | ■ ■ ■  |
| <b>Cross-industry technology transfer</b>                  | ■ ■ ■                                    | ■ ■ ■  |
| <b>Strategic cooperation with Chinese partners</b>         | ■ ■                                      | ■ ■ ■  |

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The Managing Board of Manz AG thus fulfills its obligation to inform the Supervisory Board and shareholders about the opportunities and risks of the company. It regards this reporting as an important element of corporate governance in practice.

From today's perspective, there are no risks to the future development of Manz AG that could have a material adverse effect on the Group's earnings, financial position and net assets.

## FORECAST REPORT

### ECONOMIC AND SECTORAL OUTLOOK

According to the Kiel Institute for the World Economy (IfW), the global economy is experiencing a strong upswing. In almost all major economies, the economy is pointing upwards. Global production will increase by 3.9% in 2018 and by 3.6% in 2019. According to IfW economists, economic expansion in the euro zone will amount to 2.3% this year and 2.0% in 2019. For 2018, the IfW expects the gross domestic product (GDP) to grow by 1.6% and for 2019 by 2.1%. For Germany, experts expect a GDP growth of 2.6% for 2018 and 2.3% for 2019.

For the current year 2018, the VDMA is expecting growth of 3% for the German mechanical and plant engineering industry. A deceleration in exports to China and a decline in deliveries to the United Kingdom should be offset by an increase in the domestic market in 2018. Exports to the EU partner countries (excluding the UK) and the US are likely to maintain their growth rates.

The institute SolarPower Europe assumes that the total PV capacity installed worldwide will exceed 400 GW in 2018, 500 GW in 2019, 600 GW in 2020 and 700 GW in 2021. Depending on the positive political framework conditions for a global energy turnaround, the demand for solar energy could grow even faster and reach almost 1 TW of capacity by 2021. Although the total number of relevant solar markets worldwide will increase in the coming years, SolarPower Europe estimates that a few countries will be responsible for the majority of the new capacity. Among the top 20 markets, China will be the only country to add more than 100 GW of capacity by 2021, and only two other markets - USA and India - will install more than 60 GW. For the manufacturers of components, machines and systems for photovoltaics in Germany, the VDMA expects a 7.1% increase in turnover for 2018. In the main markets of German machine manufacturers in Asia, especially China and Taiwan, substantial new production capacities were built up in 2016 and 2017. In connection with an adjustment of the subsidy guidelines in China's largest global PV market, VDMA therefore expects only a restrained build-up of new production capacities.

In the Electronics business segment, Digitimes Research forecasts a steadily growing share of AMOLED technology in the display market for the coming years. According to this study, AMOLED's market penetration is expected to exceed 50% in 2020, meaning that its market share will be higher than that of established LCD technology for the first time. In regional terms, the display market will continue to be dominated by South Korea, Taiwan and China, although a significant expansion of production capacities is expected for China. In 2021, China is expected to account for more than 50% of the world's LCD production capacity, with an estimated 158 million square meters of floor space. Based on 2017, this represents an average annual growth rate of 20.5%. In the AMOLED technology for small and medium-sized display sizes, South Korea holds a dominant market position in 2017, with a global market share of over 90% of production capacity. However, it is predicted

that China will catch up with South Korea and by 2022 already account for around a third of global production capacity. And intelligent and automated assembly and production solutions are also set to grow in China, the central global market for the industry. The reasons for this are increasing demand from the consumer electronics and automotive sectors, a generally increasing degree of automation in production and the greater complexity of manufacturing processes.

In the field of assembly and handling systems for the European automotive industry, the VDMA expects a significant increase in value added in the entire production process of electric drives. According to forecasts, this area alone will grow by an average of 22.5% by 2030. It can be assumed that the progressive automation of assembly processes will also play an important role in this context.

According to VDMA, also in terms of electronics production, the market volume in China will double from 10.7 billion euros in 2016 to 22.0 billion euros in 2020. According to VDMA, the average turnover expectations of German machine and plant manufacturers for electronics production are 6.7% higher.

VDMA is expecting enormous growth markets for batteries, especially in two areas: Electric mobility and the storage of renewable energies. High quality and durable storage systems with simultaneous affordability are mandatory for both application markets. Investments of approximately 24 billion US dollars are expected in battery production by 2025. For German machine and plant manufacturers in the field of battery production, the VDMA is forecasting sales growth of 16% for 2018.

In the field of electromobility, the VDMA sees an average increase in value added of 18.2% for the entire battery production process in Europe by 2030. With a growth rate of 21.9%, the strongest increase was recorded in the area of assembly and handling equipment.

## EXPLANATION OF TARGET ACHIEVEMENT 2017

The Managing Board of Manz AG had forecast a significant increase in sales to at least 350 million euros, largely depending on the start of the CIGS order, and a positive development of the Solar segment as planned. However, as the realization could not start until later than expected due to official formalities and the resulting economic effects could not be made up for in 2017, sales and earnings contributions were partly postponed to the fiscal year 2018, contrary to the original planning. Nevertheless, the targets of a significant increase in sales with positive EBIT including special effects were achieved.

The classic display business in the Electronics segment developed steadily and according to plan. The market for systems for the production of terminal devices with touch panel displays such as smartphones or tablet computers, on the other hand, lagged behind original expectations and demand did not pick up until the end of 2017. As a result, the segment underperformed the goal of a slight increase in sales with a balanced EBIT.



Sales in the Energy Storage segment were also lower than forecast. The reason for this was the fact that specific projects laid out in our original planning could either not be acquired or they were not implemented by the customers. At the same time, Manz AG had invested in more material and personnel-intensive research to develop standardized solutions for battery manufacturers, so that the forecasted improvement of the EBIT could not be realized.

The Contract Manufacturing segment developed very dynamically. The business activities of Talus Manufacturing made a major contribution to this development, which were expanded as planned with a significant improvement in sales and earnings.

And the service business also developed in line with the expectations of the Board, despite a decrease in revenue compared to the previous year caused by shifts in the project mix.

|                               | ACTUAL<br>2016               | Prognosis 2017   | ACTUAL<br>2017               | Prognosis 2018        |
|-------------------------------|------------------------------|--|------------------------------|-----------------------|
|                               | Sales in<br>million<br>euros | Revenue trend  | Sales in<br>million<br>euros | Sales increase        |
| <b>Group</b>                  | 231.0                        | at least 350 million euros, depending on the project start of the CIGS order | 325.0                        | between +10% and +14% |
| <b>Solar</b>                  | 21.0                         | significant increase in sales  | 104.3                        | between +5% and +10%  |
| <b>Electronics</b>            | 91.1                         | Revenues slightly above the previous year                                    | 87.9                         | between +2% and +7%   |
| <b>Energy Storage</b>         | 46.2                         | considerable increase in sales   | 23.8                         | between +25% and +35% |
| <b>Contract Manufacturing</b> | 49.4                         | considerable increase in sales   | 91.5                         | between +15% and +20% |
| <b>Service</b>                | 23.3                         | Sales in the low double-digit million euros range                            | 17.3                         | between +5% to +10%   |

|                               | EBIT in<br>million<br>euros | EBIT development                                 | EBIT in<br>million<br>euros | EBIT/EBIT margin                               |
|-------------------------------|-----------------------------|--|-----------------------------|--|
| <b>Group</b>                  | -35.9                       | significantly improved, positive EBIT            | 1.6                         | slightly positive without special effect       |
| <b>Solar</b>                  | -13.4                       | significantly positive EBIT incl. special effect | 31.0                        | 4% to 6%                                       |
| <b>Electronics</b>            | -14.4                       | balanced EBIT                                    | -17.0                       | low single-digit negative million euros range  |
| <b>Energy Storage</b>         | -16.1                       | clearly improved EBIT                            | -22.7                       | high negative single-digit million euros range |
| <b>Contract Manufacturing</b> | 1.2                         | considerable increase in profits.                | 5.0                         | 4% to 6%                                       |
| <b>Service</b>                | 6.8                         | clear position earnings contribution             | 5.6                         | 15% to 20%                                     |

## EXPECTED DEVELOPMENT OF THE GROUP AND THE SEGMENTS

In view of the stable economic situation in the countries and markets relevant to Manz AG as well as the positive industry outlook, the Managing Board expects Manz AG to profitably grow further in 2018.

The Managing Board anticipates a sales increase of between 10% and 14% compared to 2017 and a slightly positive EBIT excluding special factors, which corresponds to an improvement in earnings of around 30 million euros compared to the previous year. It also expects a significant increase in sales in all segments, which is supported by a positive development in inquiries, the order intake at the end of 2017 and beginning of 2018 as well as an order backlog of 222.0 million euros as of December 31, 2017 (previous year: 81 million euros). The Electronics and Energy Storage segments will not make a positive contribution to the Group's operating profit until 2019 due to the continued high research and development expenses for the further expansion of the product portfolio as well as investments in market cultivation.

In this way, the Managing Board aims to strengthen and expand the further development of the comprehensive technology portfolio and the good market position of Manz AG in all segments.

With respect to Manz AG's financial position, the Managing Board expects to see a balanced free cash flow from operating activities in the current 2018 fiscal year. Given cash and cash equivalents of 72.2 million euros as of December 31, 2017, and currently sufficient credit lines, the Managing Board considers Manz AG's liquidity for the fiscal year 2018 to be secured.

## FORWARD-LOOKING STATEMENTS

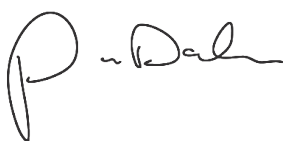
This report contains forward-looking statements, which are based on the current assumptions and forecasts of Manz AG's Managing Board. Such statements are subject to both risks and uncertainties. These and other factors can cause our company's actual results, financial performance, growth and performance to significantly deviate from the opinions stated in this report. Our company assumes no obligation to update these forward-looking statements or adapt them to future events or developments.

Reutlingen, March 16, 2018

The Executive Board of Manz AG



Eckhard Hörner-Marass



Gunnar Voss von Dahlen



Martin Drasch

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Over 500 engineers, technicians, and scientifically trained employees, as well as numerous partnerships with renowned universities, colleges, and institutes, demonstrate the importance of research and development at Manz. We not only ensure

the sustainable development of our company with continuous innovation, but we also make a significant contribution to the success of our customers with our high-quality, demand-oriented products and services.



## SUSTAINABILITY REPORTING NON-FINANCIAL GROUP-STATEMENT

As a large listed company, Manz AG is required for the first time in the fiscal year 2017 to prepare a sustainability report or make a non-financial statement in accordance with the provisions of Sections 315b and 315c in connection with 289c HGB (German Commercial Code). The non-financial group statement will be published in a separate Sustainability Report, which is not part of the group management report. The sustainability report can be viewed on our website [www.manz.com](http://www.manz.com) in the "Investor Relations" section under "Publications". Pursuant to Section 289c of the German Commercial Code (HGB), reportable aspects are environmental, employee, social, human rights and the fight against corruption and bribery. In accordance with Section 289d, it is to be decided whether or not the company is oriented towards a framework for preparing the non-financial declaration. The Managing Board of Manz AG has decided to use the German Sustainability Code (DNK) as a framework.

### NON-FINANCIAL GROUP STATEMENT IN ACCORDANCE WITH SECTIONS 315B, 315C AND 289C HGB

Reportable aspects, both in accordance with the DNK standard and the provisions of Section 289c HGB (German Commercial Code), are environmental, employee, social, human rights and anti-corruption and anti-bribery issues.

Aspects that can be derived from the DNK, or stakeholder approach based on Manz AG's business model concern employees, customers, suppliers and shareholders.

With regard to the reportable aspects, only information that serves to understand the development of business or to understand the effects on the Group's business development is to be provided. The non-financial statement in the sense of Section 289b HGB (German Commercial Code) contains a brief description of the business model of the corporation, refer to the chapter "Group business model" on page 31.

#### Environmental Issues

Both while developing new products and services and in operating production equipment, we ensure that negative impacts on the climate and environment are kept to the lowest possible level through a responsible use of resources. Manz AG has been producing photovoltaic power at its location in Reutlingen for years, and at its location in China, a substantial part of the electricity for self-consumption is also covered by a photovoltaic system on the roof of the company's building.



Each employee is responsible for treating natural resources carefully and helping to protect the environment and the climate through their individual behavior.

### **Employee Issues**

In the past, Manz AG has already taken the view that economic success and responsible conduct should not conflict with each other. In the opinion of the company, being responsible for its employees and for the environment is the essential foundation for the long-term economic success of a highly innovative high-tech equipment manufacturer. For instance, Manz AG has been offering its employees a wide range of training and further education measures at the Manz Academy for a long time. The company observes the applicable laws on employee law in Germany and the respective countries. In addition, we have set up bodies in the individual subsidiaries, such as voluntary employee council in Germany, who are committed to employee issues. Within the Group, an open and trusting relationship is maintained between the Managing Board, the respective managing directors, the employees and their representatives. In addition, each company has central contacts for special topics such as equal treatment, occupational safety and health. Together with employee representatives, we create reliable working conditions, e. g. through a permanent improvement of occupational safety and working time models for flexible working time arrangements.

### **Social Issues**

As an important employer in the Reutlingen region, Manz AG assumes responsibility for the community. In this context, local sports and cultural associations and organizations in which Manz AG employees work on a voluntary basis are supported by financial contributions as part of the "Employees in voluntary work" initiative.

As a globally active high-tech equipment manufacturer, however, we also face up to this social responsibility in other regions of the world. For instance, again in the past fiscal year, the project "Metal Workshop – Give someone a Future", which has been in operation since 2008, was successfully continued in close cooperation with the Evangelical Youth Foundation and the YMCA Ethiopia. The goal is to provide help for self-help by making basic training as a general metal worker possible for interested, motivated youths from disadvantaged ethnic groups. To this end, Manz AG developed its own instruction workshop for metal working in Ethiopia's capital city Addis Ababa. In 2017, the ninth class graduated and thus has the necessary expertise to get a start in working life.

### **Observance of Human Rights**

We respect internationally recognized human rights and support compliance with those rights. We strictly reject all forms of forced labor and child labor. We will discuss the extent to which the obligation to comply with human rights and the exclusion of forced and child labor can be included in future in contracts with service providers and suppliers as part of

the preparation of our sustainability strategy. However, these points are already part of our General Terms and Conditions (GTC) today.

### **Combating Corruption and Bribery**

Compliance at Manz AG ensures Group-wide compliance with laws and regulations, including the company's own guidelines. Manz AG asserts itself in competition through quality, strength of innovation and global presence. In order to gain the trust of our customers and business partners, we reject all forms of corruption. This means that each employee complies with regulations on competition in their specific area of responsibility. Agreements with competitors that violate antitrust law, for example regarding prices or other conditions, are prohibited. Suppliers are commissioned based on objective and clear criteria. Improper grounds may not play a role in their selection. When commissioning individuals to broker business transactions, Manz AG ensures that commission payments and other compensation are appropriate in relation to the services performed.

Manz AG is an internationally active company. It observes relevant trade controls and regulations on import and export controlling and embargoes. The Group takes all necessary measures to prevent money laundering within its sphere of influence.

### **Significance for the Performance and Position of Manz AG**

The long-term economic success of Manz AG is determined by the aspects of employee issues and the responsible use of natural resources from a non-financial point of view. The concepts that Manz AG pursues here are implemented under environmental and employee concerns.

### **Significant Risks**

Risks arising from the economic consideration of the above-mentioned aspects are contained in the opportunities and risks report, as part of the Group management report and management report, on page 73 et seqq. They relate to aspects that may influence the Group's economic performance and its market presence both now and in the future. Significant risks, which are likely to have serious negative effects on the ecological or social aspects, cannot be deduced from the business model of Manz AG.

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## CONSOLIDATED INCOME STATEMENT

(in EUR tsd.)

|  | Notes | 2017           | 2016           |
|--|-------|----------------|----------------|
| Revenues   | 1     | 324,967        | 231,010        |
| Inventory changes, finished and unfinished goods             |       | 661            | 128            |
| Work performed by the entity and capitalized                 | 2     | 9,478          | 7,733          |
| <b>Total operating revenues</b>                              |       | <b>335,106</b> | <b>238,871</b> |
| Other operating income                                       | 3     | 38,643         | 7,369          |
| Cost of materials  | 4     | -222,620       | -138,432       |
| <b>Gross profit</b>  |       | <b>151,129</b> | <b>107,808</b> |
| Personnel expenses   | 5     | -74,517        | -79,142        |
| Other operating expenses                                     | 6     | -65,161        | -50,443        |
| <b>EBITDA</b>  |       | <b>11,451</b>  | <b>-21,777</b> |
| Amortization/Depreciation                                    |       | -9,895         | -14,154        |
| <b>Operating earnings (EBIT)</b>                             |       | <b>1,556</b>   | <b>-35,931</b> |
| Finance income   | 7     | 96             | 48             |
| Finance costs  | 8     | -1,754         | -3,716         |
| <b>Earnings before taxes (EBT)</b>                           |       | <b>-102</b>    | <b>-39,599</b> |
| Income taxes   | 10    | -2,696         | -2,956         |
| <b>Consolidated net profit</b>                               |       | <b>-2,798</b>  | <b>-42,555</b> |
| of which attributable to minority interests                  | 11    | 345            | 58             |
| of which attributable to shareholders of Manz AG             |       | -3,143         | -42,613        |
| Weighted average number of shares                            |       | 7,744,088      | 6,847,065      |
| Earnings per share<br>(diluted = undiluted) in EUR per share | 12    | -0.41          | -6.22          |

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(in EUR tsd.)

|   | 2017          | 2016           |
|---|---------------|----------------|
| <b>Consolidated net profit</b>  | <b>-2,798</b> | <b>-42,555</b> |
| Difference resulting from currency translation  | 741           | 3,715          |
| Cash flow hedges  | 1             | 2,763          |
| Tax effect resulting from components not recognized in profit/loss  | 0             | -638           |
| Available-for-sale financial assets   | -670          | 0              |
| Tax effect resulting from components not recognized in profit/loss  | 195           | 0              |
| <b>Total of expenditures and income recorded directly in equity capital with future reclassification with tax effect</b>    | <b>267</b>    | <b>5,840</b>   |
| Revaluation of defined benefit pension plans  | -387          | -136           |
| Tax effect resulting from components not recognized in profit/loss  | 90            | 38             |
| <b>Total of expenditures and income recorded directly in equity capital without future reclassification with tax effect</b> | <b>-297</b>   | <b>-98</b>     |
| <b>Group comprehensive income</b>   | <b>-2,828</b> | <b>-36,813</b> |
| of which minority interests   | 123           | 290            |
| of which shareholders of Manz AG  | -2,951        | -37,103        |

## CONSOLIDATED BALANCE SHEET

### ASSETS (in EUR tsd.)

|                                  | Notes | Dec. 31, 2017  | Dec. 31, 2016  |
|----------------------------------|-------|----------------|----------------|
| <b>Non-current assets</b>        |       |                |                |
| Intangible assets                | 14    | 58,729         | 77,796         |
| Property, plant and equipment    | 15    | 38,070         | 39,395         |
| Financial assets                 | 16    | 23,575         | 0              |
| Other non-current assets         |       | 540            | 723            |
| Deferred tax assets              | 10    | 4,934          | 3,500          |
|                                  |       | <b>125,848</b> | <b>121,414</b> |
| <b>Current assets</b>            |       |                |                |
| Inventories                      | 17    | 62,159         | 48,950         |
| Trade receivables                | 18    | 95,709         | 77,726         |
| Current income tax receivables   |       | 4              | 651            |
| Derivative financial instruments | 19    | 29             | 0              |
| Other current assets             | 20    | 12,270         | 7,651          |
| Cash and cash equivalents        | 21    | 72,209         | 55,722         |
|                                  |       | <b>242,380</b> | <b>190,700</b> |
| <b>Total assets</b>              |       | <b>368,228</b> | <b>312,114</b> |

LIABILITIES AND SHAREHOLDERS' EQUITY (in EUR tsd.)

|                                   | Notes     | Dec. 31, 2017  | Dec. 31, 2016  |
|-----------------------------------|-----------|----------------|----------------|
| <b>Equity</b>                     | <b>22</b> |                |                |
| Issued capital                    |           | 7,744          | 7,744          |
| Capital reserve                   |           | 98,917         | 143,681        |
| Revenue reserves                  |           | 31,018         | -10,839        |
| Other comprehensive income        |           | 20,125         | 19,933         |
| Shareholders of Manz AG           |           | <b>157,804</b> | <b>160,519</b> |
| Non-controlling interests         |           | 5,549          | 4,587          |
|                                   |           | <b>163,353</b> | <b>165,106</b> |
| <b>Non-current liabilities</b>    |           |                |                |
| Non-current financial liabilities | <b>23</b> | 3,332          | 2,036          |
| Pension provisions                | <b>24</b> | 7,435          | 7,704          |
| Other non-current provisions      | <b>25</b> | 2,716          | 2,868          |
| Other non-current liabilities     | <b>26</b> | 248            | 335            |
| Deferred tax liabilities          | <b>10</b> | 3,480          | 2,127          |
|                                   |           | <b>17,211</b>  | <b>15,070</b>  |
| <b>Current liabilities</b>        |           |                |                |
| Current financial liabilities     | <b>27</b> | 36,973         | 52,379         |
| Trade payables                    | <b>28</b> | 117,509        | 47,228         |
| Payments received                 | <b>18</b> | 13,395         | 9,827          |
| Current income tax liabilities    |           | 1,406          | 686            |
| Other current provisions          | <b>29</b> | 5,180          | 7,294          |
| Derivative financial instruments  | <b>19</b> | 7              | 158            |
| Other current liabilities         | <b>30</b> | 13,194         | 14,355         |
| Financial liabilities from leases |           | 0              | 11             |
|                                   |           | <b>187,664</b> | <b>131,938</b> |
| <b>Total liabilities</b>          |           | <b>368,228</b> | <b>312,114</b> |

## CONSOLIDATED STATEMENT OF CASH FLOWS

(in EUR tsd.)

|  | 2017           | 2016           |
|--|----------------|----------------|
| Operating Earnings (EBIT)  | 1,556          | -35,931        |
| Depreciation/amortization of fixed assets  | 9,895          | 14,154         |
| Increase (+)/decrease (-) of pension provisions and other non-current provisions         | -187           | 231            |
| Other non-cash income (-) and expenses (+)   | 236            | 131            |
| Gains (-)/losses (+) from disposal of assets   | -34,806        | 3,246          |
| Increase (-) / decrease (+) in inventories, trade receivables and other assets           | -33,947        | -7,367         |
| Increase (+) / decrease (-) in trade payables and other liabilities                      | 79,332         | 12,913         |
| Received (+)/Paid income taxes (-)   | -896           | -640           |
| Interest paid  | -1,754         | -3,480         |
| Interest received  | 96             | 34             |
| <b>Cash flow from operating activities</b>   | <b>19,525</b>  | <b>-16,709</b> |
| Cash receipts from the sale of fixed assets  | 726            | 49             |
| Cash payments for the investments in intangible assets and property, plant and equipment | -15,207        | -9,045         |
| Cash receipts from the sale of consolidated entities less cash outflow                   | 48,676         | 0              |
| Payments for the acquisition of consolidated entities and other business units           | -24,221        | 0              |
| <b>Cash flow from investing activities</b>   | <b>9,974</b>   | <b>-8,996</b>  |
| Cash receipts from the assumption of non-current financial liabilities                   | 3,700          | 1,052          |
| Cash payments for the repayment of non-current financial liabilities                     | -886           | -894           |
| Change in current financial liabilities  | -15,406        | -28,621        |
| Purchase of treasury shares  | -9             | -10            |
| Cash payments for the repayment of financial leases                                      | -11            | -13            |
| Cash receipts from equity increase   | 0              | 80,709         |
| Costs of capital procurement (before taxes)  | 0              | -5,880         |
| Changes in restricted cash   | -16,634        | 0              |
| <b>Cash flow from financing activities</b>   | <b>-29,246</b> | <b>46,343</b>  |
| <b>Cash and cash equivalents at the end of the period</b>                                |                |                |
| Net change in cash funds (subtotal 1-3)  | 253            | 20,638         |
| Effect of exchange rate movements on cash and cash equivalents                           | -400           | 712            |
| Cash and cash equivalents on January 1   | 55,722         | 34,372         |
| Cash and cash equivalents on December 31   | <b>55,575</b>  | <b>55,722</b>  |
| <b>Composition of cash and cash equivalents</b>  |                |                |
| Cash and cash equivalents  | 72,209         | 55,722         |
| less restricted cash   | -16,634        | 0              |
| <b>Cash and cash equivalents on December 31</b>  | <b>55,575</b>  | <b>55,722</b>  |

The cash flow statement is discussed in Note 13.

## CONSOLIDATED STATEMENT OF CHANGES TO EQUITY

(in EUR tsd.)

|                                       | Cumulative other equity |                  |                 |                  |  |                                     |                  |   |   |                 |                                 | Total equity capital |  |                 |
|---------------------------------------|-------------------------|------------------|-----------------|------------------|--|-------------------------------------|------------------|---|---|-----------------|---------------------------------|----------------------|--|-----------------|
|                                       | Subscribed capital      | Capital reserves | Treasury shares | Revenue reserves | Components which are not transferred to profit or loss |                                     |                  | Components which may be transferred to profit or loss |   |                 | Cumulative other equity capital |                      | Equity capital attributable to shareholders of Manz AG | Minority shares |
|                                       |                         |                  |                 |                  | Remeasurement of pensions                              | Available-for-sale financial assets | Cash flow hedges | Currency translation                                  | Equity capital attributable to share-holders of Manz AG | Minority shares |                                 |                      |  |                 |
| <b>As of January 1, 2016</b>          | <b>5,421</b>            | <b>99,345</b>    | <b>0</b>        | <b>1,774</b>     | <b>-1,949</b>  | <b>0</b>                            | <b>-2,140</b>    | <b>18,512</b>   | <b>14,423</b>   | <b>120,963</b>  | <b>4,297</b>                    | <b>125,260</b>       |  |                 |
| Consolidated net profit               |                         |                  |                 | -42,613          |  |                                     |                  |   |   | -42,613         | 58                              | -42,555              |  |                 |
| Other comprehensive income            |                         |                  |                 |                  | -98  |                                     | 2,125            | 3,483   | 5,510   | 5,510           | 232                             | 5,742                |  |                 |
| Consolidated income statement         | 0                       | 0                | 0               | -42,613          | -98  | 0                                   | 2,125            | 3,483   | 5,510   | -37,103         | 290                             | -36,813              |  |                 |
| Capital increase                      | 2,323                   | 78,386           |                 |                  |  |                                     |                  |   |   | 80,709          |                                 | 80,709               |  |                 |
| Costs of raising capital after taxes  |                         | -4,181           |                 |                  |  |                                     |                  |   |   | -4,181          |                                 | -4,181               |  |                 |
| Withdrawal from capital reserve       |                         | -30,000          |                 | 30,000           |  |                                     |                  |   |   | 0               |                                 | 0                    |  |                 |
| Purchase of treasury shares           |                         |                  | -10             |                  |  |                                     |                  |   |   | -10             |                                 | -10                  |  |                 |
| Use of treasury shares                |                         |                  | 10              |                  |  |                                     |                  |   |   | 10              |                                 | 10                   |  |                 |
| Share-based payment                   |                         | 131              |                 |                  |  |                                     |                  |   |   | 131             |                                 | 131                  |  |                 |
| <b>As of Dec. 31, 2016</b>            | <b>7,744</b>            | <b>143,681</b>   | <b>0</b>        | <b>-10,839</b>   | <b>-2,047</b>  | <b>0</b>                            | <b>-15</b>       | <b>21,995</b>   | <b>19,933</b>   | <b>160,519</b>  | <b>4,587</b>                    | <b>165,106</b>       |  |                 |
| <b>As of January 1, 2017</b>          | <b>7,744</b>            | <b>143,681</b>   | <b>0</b>        | <b>-10,839</b>   | <b>-2,047</b>  | <b>0</b>                            | <b>-15</b>       | <b>21,995</b>   | <b>19,933</b>   | <b>160,519</b>  | <b>4,587</b>                    | <b>165,106</b>       |  |                 |
| Consolidated net profit               |                         |                  |                 | -3,143           |  |                                     |                  |   |   | -3,143          | 345                             | -2,798               |  |                 |
| Other comprehensive income            |                         |                  |                 |                  | -297   | -475                                | 1                | 963   | 192   | 192             | -222                            | -30                  |  |                 |
| Consolidated income statement         | 0                       | 0                | 0               | -3,143           | -297   | -475                                | 1                | 963   | 192   | -2,951          | 123                             | -2,828               |  |                 |
| Withdrawal from capital reserves      |                         | -45,000          |                 | 45,000           |  |                                     |                  |   |   | 0               |                                 | 0                    |  |                 |
| Purchase of treasury shares           |                         |                  | -9              |                  |  |                                     |                  |   |   | -9              |                                 | -9                   |  |                 |
| Use of treasury shares                |                         |                  | 9               |                  |  |                                     |                  |   |   | 9               |                                 | 9                    |  |                 |
| Share-based payment                   |                         | 236              |                 |                  |  |                                     |                  |   |   | 236             |                                 | 236                  |  |                 |
| Changes to the basis of consolidation |                         |                  |                 |                  |  |                                     |                  |   |   | 0               | 839                             | 839                  |  |                 |
| <b>As of Dec. 31, 2017</b>            | <b>7,744</b>            | <b>98,917</b>    | <b>0</b>        | <b>31,018</b>    | <b>-2,344</b>  | <b>-475</b>                         | <b>-14</b>       | <b>22,958</b>   | <b>20,125</b>   | <b>157,804</b>  | <b>5,549</b>                    | <b>163,353</b>       |  |                 |

Further information of the Statement of Changes in Equity is provided in the Note 22.

## NOTES

### GENERAL DISCLOSURES

Manz AG has its headquarters at Steigäckerstrasse 5 in 72768 Reutlingen, Germany. Manz AG and its subsidiaries ("Manz Group" or "Manz") are competent in seven technological fields: automation, laser processing, vacuum coating, printing and coating, measurement technology, wet chemistry, and roll-to-roll. Manz deploys and continuously develops these technologies in three strategic business segments: Electronics, Solar, and Energy Storage. Manz AG shares are traded on the regulated market (Prime Standard segment) of the Frankfurt Stock Exchange.

Manz AG's consolidated financial statements as of December 31, 2017, were prepared in accordance with International Financial Reporting Standards (IFRS), as applicable in the EU, and the supplementary provisions of German commercial law and company law to be applied under Section 315e of the German Commercial Code (HGB). All mandatory standards and interpretations were taken into account. IFRS standards that have not yet become mandatory are not applied.

To aid clarity, individual items have been combined in the balance sheet and the income statement and listed separately and explained in the notes. The Manz Group's fiscal year covers the period from January 1 to December 31 of any year. The consolidated financial statements are prepared in euros. Unless otherwise stated, the disclosures in the appendix are made in thousands of euros. The income statement is prepared in accordance with the total cost method. The consolidated financial statements for 2017 were approved on March 16, 2018, by resolution of the Executive Board, for presentation to the Supervisory Board.



## ACCOUNTING PRINCIPLES

### BASIS OF CONSOLIDATION

The consolidated financial statements of Manz AG include all domestic and foreign companies over which Manz AG can exercise direct or indirect control. Controlling influence exists when Manz AG is exposed to, or has rights to, fluctuating returns on its investment and has the ability to influence these returns through its power over the company.

In addition to Manz AG, the following foreign subsidiaries belonged to the group of consolidated companies as of December 31, 2017:

|   |                                  | Interest<br>in % |
|---|----------------------------------|------------------|
| <b>Manz USA Inc.</b>                              | North Kingstown/USA              | <b>100.0 %</b>   |
| <b>Manz Hungary Kft.</b>                          | Debrecen/Hungary                 | <b>100.0 %</b>   |
| <b>Manz Slovakia s.r.o.</b>                       | Nove Mesto nad Vahom/Slovakia    | <b>100.0 %</b>   |
| <b>Manz Italy s.r.l.</b>                          | Sasso Marconi/Italy              | <b>100.0 %</b>   |
| <b>Suzhou Manz New Energy Equipment Co., Ltd.</b> | Suzhou/PRC                       | <b>56.0 %</b>    |
| <b>Manz Asia Ltd.</b>                             | Hong-Kong/PRC                    | <b>100.0 %</b>   |
| Manz China WuZhong Co. Ltd.                       | Suzhou/PRC                       | 100.0 %          |
| Manz China Suzhou Ltd.                            | Suzhou/PRC                       | 100.0 %          |
| Manz (Shanghai) Trading Company Ltd.              | Shanghai/PRC                     | 100.0 %          |
| Manz China Shanghai Ltd. (Shanghai)               | Shanghai/PRC                     | 100.0 %          |
| Manz India Private Ltd.                           | New Delhi/India                  | 75.0 %           |
| Manz Chungli Ltd.                                 | Chungli/Taiwan                   | 100.0 %          |
| Manz Taiwan Ltd.                                  | Chungli/Taiwan                   | 100.0 %          |
| Talus Manufacturing Ltd.                          | Chungli/Taiwan                   | 80.5 %           |
| Manz (B.V.I.) Ltd.                                | Road Town/British Virgin Islands | 100.0 %          |
| Intech Machines (B.V.I.) Co. Ltd.                 | Road Town/British Virgin Islands | 100.0 %          |

In September 2017, Suzhou Manz New Energy Equipment Co., Ltd., Suzhou, PR China was founded, in which Manz AG has a 56% interest. The purpose of the Company is the dissemination of CIGS technology in China.

NICE Solar Energy GmbH, Schwäbisch Hall (former: Manz CIGS Technology GmbH) was sold to NICE PV Research Ltd. Beijing, PRC, during the reporting period. Manz AG holds a 15% interest in NICE PV Research Ltd. Beijing, China, which is not included in the scope of consolidation. Furthermore, MVG Hungary Kft., Debrecen, Hungary, was merged with Manz Hungary Kft., Debrecen, Hungary, thus leaving the Group.

The list of holdings is published in the online German Federal Gazette.

The financial statements of the subsidiary companies are prepared on the reporting date of the consolidated financial statements, which corresponds to the reporting date of Manz AG.

## CONSOLIDATION PRINCIPLES

Acquisition accounting uses the purchase method. In this case, the acquired assets and liabilities are measured at their fair market values at the acquisition date. The acquisition costs for the acquired shares are then offset against the proportionate newly measured equity of the subsidiary. Any remaining positive difference from offsetting the purchase price against the identified assets and liabilities is presented as goodwill in intangible assets. Costs incurred as part of the corporate merger are expensed and therefore do not represent any part of the acquisition costs.

Any difference arising upon acquisition of additional shares or sale of shares after initial consolidation without loss of control in a subsidiary that has already been fully consolidated is directly offset against equity.

In the case of successive corporate mergers, the share of equity in the acquired company previously held by the acquirer is recalculated at fair market value at the acquisition date and the resulting gain or loss recognized in profit or loss.

If a previous subsidiary is deconsolidated, the difference between the consideration received and the outgoing net assets at the date when control is lost, is recognized in profit or loss.

Expenses and income as well as receivables and payables between consolidated companies are offset and subtotals eliminated. The necessary tax deferrals are carried out on consolidation processes. Furthermore, guarantees assumed by Manz AG or one of its consolidated subsidiaries in favor of other consolidated subsidiaries are eliminated.

Minority interests represent that part of the result and the net assets that is not attributable to the Group. Minority interests are presented separately in the consolidated income statement and the consolidated balance sheet. They are recognized within equity in the consolidated balance sheet, separately from the equity attributable to the shareholders of the parent company.

## CURRENCY CONVERSION

The financial statements of subsidiaries included in the Group that are prepared in foreign currency are translated into euros in accordance with IAS 21. The functional currency of the included companies is almost always the same as the respective national currency, as these subsidiaries run their business activities independently in financial, economic, and

organizational respects. For a subsidiary, the functional currency is not the national currency, but the euro. Assets, liabilities, and contingencies are translated using the average exchange rate on the reporting date, while equity is translated using historical exchange rates. The income statement is translated at the average annual exchange rate. Translation differences resulting from translating the financial statements are directly recognized as a separate item in equity without affecting net income until disposal of the subsidiary.

In the annual financial statements of the companies included in the consolidated financial statements, foreign currency items are initially measured at cost. Exchange rate gains and losses as of the balance sheet date are recognized in profit or loss.

### Exchange Rates of the Most Important Currencies

| (Corresponds to 1 EUR) |     | Closing rate |            | Average rate |          |
|------------------------|-----|--------------|------------|--------------|----------|
|                        |     | 31.12.2017   | 31.12.2016 | 2017         | 2016     |
| USA                    | USD | 1.1980       | 1.0525     | 1.1302       | 1.1070   |
| China                  | CNY | 7.7973       | 7.3107     | 7.6321       | 7.3536   |
| Hong-Kong              | HKD | 9.3817       | 8.1616     | 8.8091       | 8.5927   |
| Taiwan                 | TWD | 35.6042      | 34.0011    | 34.4040      | 35.7467  |
| Hungary                | HUF | 310.6189     | 310.3100   | 309.5151     | 312.5100 |

## ACCOUNTING AND VALUATION PRINCIPLES

Manz AG's assets and liabilities and those of the subsidiaries included by way of full consolidation are recognized and measured using uniform accounting policies applicable within the Manz Group as of December 31, 2017.

### FIXED ASSETS

Intangible assets that are not acquired in a business combination are initially recognized at acquisition or manufacturing cost. The cost of intangible assets acquired in a business combination is fair market value at acquisition. Following initial recognition, intangible assets are carried at acquisition or manufacturing cost, less any accumulated amortization and impairment losses. Costs for internally generated intangible assets, with the exception of capitalized development costs, are not capitalized, but recognized in profit or loss in the period in which they are incurred.

A distinction is drawn between intangible assets with a finite useful life and those with an indefinite useful life.

Intangible assets with a finite useful life are amortized on a straight-line basis over their economic useful life and checked for possible impairment, if there are indications that the intangible asset may be impaired. The period and method of amortization for intangible assets with a finite useful life are reviewed at least at the end of each fiscal year. Any necessary changes to the method or period of amortization due to changes in the anticipated useful life or to the anticipated use of the future economic benefit of the asset are accounted for as changes in estimates.

The useful lives of intangible assets with a finite useful life are as follows:

|                             | Years  |
|-----------------------------|--------|
| Software                    | 3 to 5 |
| Patents                     | 5 to 8 |
| Activated development costs | 3 to 5 |
| Technologies                | 6 to 8 |
| Customer relationships      | 6 to 8 |

Intangible assets with an indefinite useful life are not amortized. These include goodwill and brand names from business combinations. The indefinite nature of the useful life of brands is based on the assessment that the inflow of economic benefits from these assets cannot be attributed to a specific period (for further information we refer to chapter "Impairment Test").

Development costs for equipment and equipment components are capitalized as long as the conditions of IAS 38 are fulfilled. In this case, acquisition and manufacturing cost covers all the costs directly attributable to the development process, as well as a reasonable share of development-related overheads. Capitalized development costs are amortized beginning at the start of production using the straight-line method over the expected product life cycle, usually three to five years. If capitalized development costs are not yet amortized, each individual asset or cash-generating unit (CGU) is tested for impairment at least once a year. Research costs and development costs that cannot be capitalized are expensed as incurred.

Items of property, plant, and equipment are measured at cost, less depreciation in accordance with their ordinary useful life and write-downs based on impairments. Costs for repairs and maintenance are recognized as current expenses. Straight-line depreciation is carried out according to the anticipated progress of the consumption of the future economic benefit. Systematic depreciation is based predominantly on the following useful lives:

|   | Years    |
|---|----------|
| Buildings                                       | 20 to 50 |
| Technical equipment and machinery               | 6 to 15  |
| Other equipment, operating and office equipment | 3 to 13  |

Residual values, useful lives, and depreciation methods of assets are reviewed at the end of a given fiscal year and adjusted prospectively if necessary.

If a considerable period of time is required for the acquisition or manufacture of a qualified asset to prepare it for its intended use, the directly attributable borrowing costs are capitalized until the asset is ready for its intended use. No borrowing costs were capitalized in the current and previous fiscal years.

Within the scope of finance leases, economic ownership is attributed to the lessee in those cases in which the lessee essentially bears all the risks and rewards incidental to ownership (IAS 17). If economic ownership is attributable to the Manz Group, capitalization takes place at the inception of the lease at the lower of fair value or the present value of the minimum lease payments. Depreciation is carried out on a straight-line basis over the shorter of economic useful life or the term of the lease. Payment obligations resulting from future lease payments are stated as liabilities under financial liabilities from leases. Determining whether an agreement contains a lease is based on the economic content of the agreement at the time the agreement was concluded and requires an assessment as to whether the fulfillment of the contractual agreement depends on the use of a particular asset or assets and whether the agreement grants a right to use the asset.

## IMPAIRMENT TEST

An impairment test is performed at least once a year for goodwill and intangible assets with an indefinite useful life, but for capitalized development costs and other intangible assets with a finite useful life as well as property, plant, and equipment and financial assets, the test is performed only if there are concrete indications.

An impairment is recognized in profit and loss if the recoverable amount of the asset is lower than the carrying value. The recoverable amount is generally estimated separately for each asset. If this is not possible, the calculation is based on a group of assets that constitutes a cash-generating unit (CGU). The recoverable amount is the higher of fair market value less costs to sell and value in use.

The fair market value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction less costs to sell. Value in use is determined using the

discounted cash flow method on the basis of the estimated future cash flows expected to arise from the continuing use of an asset and its disposal. An interest rate before taxes corresponding to market conditions is used as the discount rate.

To determine the recoverability of goodwill and other intangible assets with an indefinite useful life (brand rights), the value in use of the cash-generating unit in question is generally used. The basis for this is the current plan prepared by management. The detailed planning period extends over a period of three years.

For the following years, plausible assumptions are made about the future development. The planning assumptions are adapted in each case to the current level of knowledge. In this case, reasonable assumptions about macroeconomic trends and historic developments are taken into account.

If the reasons for an impairment that have been charged in previous years no longer apply, the impairment is reversed to the recoverable amount (with the exception of goodwill). The amount reversed must not exceed the amount that would have been determined as the carrying amount, taking any depreciation and amortization into account, if no impairment loss had been recognized for the asset in prior years.

## INVENTORIES

Inventories are recognized at acquisition or manufacturing cost or the lower net realizable value, in accordance with IAS 2 (Inventories). Manufacturing cost includes not only direct costs, but also appropriate parts of the necessary material costs and production overheads, as well as production-related depreciation and proportionate administrative overheads, that can be directly allocated to the manufacturing process. Where required, the average cost method is used as the simplified measurement method.

## CONSTRUCTION CONTRACTS

Manz mainly generates its revenues from construction contracts, which are accounted for using the percentage of completion method (PoC method) in accordance with IAS 11. In this case, revenue and expected margins are recognized in proportion to the stage of completion of a contract. This calculation is based on the contract revenue as agreed with the customer and the expected contract costs. The stage of completion of a contract, which determines what portion of revenue is recognized, is determined based on the ratio between the order costs accrued as of the reporting date and the calculated total costs (cost-to-cost method). As a result of this accounting method, both revenues and the related costs are realized in the period in which they were generated or incurred.

If the total of incurred contract costs and disclosed profits exceeds payments received, the construction contracts are recognized on the asset side under future receivables from construction contracts as a component of "Trade receivables." A negative balance is reported under "Payments received." Expected losses from customer specified contracts are accounted for as an expense in the full amount by writing off capitalized assets and, in addition, recognizing provisions.

Other revenue is recognized, in accordance with IAS 18, "Revenue," once the relevant opportunities and risks have been transferred. This is usually the date on which the finished goods or merchandise were delivered or the services rendered.

## FINANCIAL INSTRUMENTS

According to IAS 39, a financial instrument is any contract that gives rise to a financial asset at one entity and a financial liability or equity instrument at another entity. If the trade date of a financial asset can differ from the settlement date, the settlement date determines initial recognition. A financial instrument is initially measured at fair market value. Transaction costs are included. In terms of subsequent measurement, financial instruments are recognized either at their fair value or at amortized cost.

IAS 39 distinguishes between financial assets in the categories for the valuation:

- Financial assets at fair market value through profit or loss and financial assets held for trading
- Investments held to maturity
- Financial assets available for sale
- Loans and receivables

Financial liabilities are assigned to the following two categories:

- Financial liabilities at fair market value through profit or loss
- Financial liabilities measured at amortized cost

Depending on the categorization of financial instruments, they are measured either at their fair value or at amortized cost.

Fair value corresponds to the market or exchange price as long as the financial instruments to be measured are traded in an active market. If there is no active market for a financial instrument, fair market value is established using suitable financial valuation methods, such as recognized option pricing models or discounted future cash flows using the market rate of interest and checked by confirmations from banks that handle the transactions. Amortized cost corresponds to the acquisition costs less repayments, impairments and the amortization of a difference between the acquisition costs and the amount repayable

on maturity, which is taken into account in accordance with the effective interest method. Financial instruments are recognized as soon as Manz becomes a contractual party to the financial instrument. The financial instrument is generally derecognized if the contractual right to cash flows expires or this right is transferred to a third party.

## ORIGINAL FINANCIAL INSTRUMENTS

The original financial instruments particularly include receivables from customers and cash and cash equivalents, as well as financial liabilities and trade payables. Primary financial instruments are initially recognized at their fair market value. At initial measurement, fair market value corresponds, in principle, to the transaction price; i.e., the consideration given or received.

After initial recognition, primary financial instruments are measured either at their fair market value or at amortized cost, depending on the category to which they belong.

Loans and receivables are generally carried at amortized cost, less impairment. Impairments are charged if there is objective evidence for such. Evidence of an impairment may exist if there are signs that the debtor or a group of debtors is in considerable financial difficulties, if interest or principal payments are missed or delayed, if insolvency is likely, and if observable data point to a measurable reduction in expected future cash flows, such as a change in arrears or economic conditions that correlate with defaults. In the Manz Group, this category primarily covers receivables from customers and other receivables.

Impairment losses are charged using an allowance account.

Assets held for trading and held for sale are measured at fair market value. The change in the fair value of assets held for trading is recognized in profit or loss. Changes in the fair market value of assets held for sale are recognized in accumulated other comprehensive income, less a tax component.

Financial instruments held to maturity are measured at amortized cost. Gains and losses from their subsequent measurement are recognized in profit or loss.

Financial liabilities, with the exception of derivative financial instruments and earn out components, are subsequently measured at amortized cost.

## DERIVATIVE FINANCIAL INSTRUMENTS

Manz AG uses derivative financial instruments only to hedge against interest and currency risks resulting from operating activities.



In accordance with IAS 39, derivative financial instruments are recognized at their fair market value on both initial recognition and subsequent measurement. The fair market values of traded derivative financial instruments correspond to their market prices. Non-traded derivative financial instruments are calculated by applying recognized measurement models based on discounted cash flow analysis and by referring to current market parameters. In terms of recognition of the change in fair values – recognition in the income statement or recognition directly in equity – what is crucial is whether or not the derivative financial instrument is involved in an effective hedging relationship according to IAS 39. If there is no hedge accounting, changes to the fair market values of the derivative instruments are immediately recognized in profit or loss. If, on the other hand, there is an effective hedging relationship according to IAS 39, the hedge is accounted for as such.

At Manz, the hedge accounting regulations under IAS 39 are applied to hedge future cash flows (cash flow hedges). In this case, at the start of the hedging relationship, the relationship between the hedged item and the hedge is documented, including the risk management objectives. Furthermore, when the hedging relationship is entered and throughout its course, it is regularly documented whether the hedging instrument designated in the hedging relationship is effective to a large degree with regard to compensating for the change in the cash flows of the hedged items.

Hedge accounting can be used to hedge currency risks from investments in foreign subsidiaries (hedge of a net investment in a foreign operation). Unrealized exchange differences are initially recognized directly in equity and reclassified to profit or loss at the time the foreign operation is sold.

The effective part of the change in the fair market value of a derivative or a primary financial instrument that has been designated as a hedging instrument is recognized in equity under retained earnings from cash flow hedges, after deduction of deferred taxes. The profit or loss attributable to the ineffective part is immediately presented in profit or loss in "Other operating income" or "Other operating expenses."

Amounts recognized in equity are transferred to the income statement in the period in which the hedged item is recognized in profit or loss. If the original hedged item is no longer expected to occur, the accumulated, unrealized profits and losses reported in equity up to that point are also recognized in profit or loss.

## LIQUID FUNDS

Liquid funds comprise cash and cash equivalents in the form of bank accounts and short-term financial investments with banks that have a residual maturity of up to three months on initial recognition. They are measured at amortized cost.

## SHARE-BASED PAYMENT

As an additional incentive-based payment for the work performed, Manz Group employees (including executives) receive share-based compensation in the form of equity instruments. This is known as the Performance Share Plan and was first introduced in the 2008 fiscal year. The costs arising from the granting of share awards are measured based on the fair market value of these equity instruments on the date they are granted. Fair market value is determined by applying an appropriate measurement model (for more details, see disclosure 9).

The expenses resulting from the granting of equity instruments and the corresponding increase in equity are recognized over the period in which the exercise and performance conditions have to be fulfilled (vesting period). This period ends on the vesting date; i.e., the date when the employee in question becomes irrevocably entitled. The accumulated expenses from the granting of equity instruments disclosed on each reporting date up to the vesting date reflect the part of the vesting period that has already expired and the number of equity instruments that can actually be exercised when the vesting period expires, according to the Group's best estimates. The income or expense recognized in the profit or loss for the period corresponds to the development of the accumulated expenses recognized at the beginning and end of the reporting period.

No expense is recognized for compensation rights that do not become exercisable. Exceptions to this are compensation rights for which certain market conditions have to be fulfilled before they can be exercised. Irrespective of whether the market conditions are fulfilled, these are seen as exercisable, provided that all other performance conditions are fulfilled.

If the conditions of a compensation agreement compensated by equity instruments are modified, expenses are recognized in the amount in which they would have been incurred if the conditions of the agreement had not been modified. The company also recognizes the effects of modifications that increase the total fair value of the share-based compensation agreement or are associated with another benefit for the employee, measured at the time of the modification.

If a compensation agreement compensated by equity instruments is canceled, this is treated as if it had been exercised on the cancellation date. The expense not yet recognized is immediately recognized. This is applied to all compensation agreements if non-vesting conditions, over which either the company or the counterparty has an influence, are not fulfilled. If the annulled compensation agreement is replaced by a new compensation agreement, however, and the new compensation agreement is declared as a replacement for the annulled compensation agreement on the day it is granted, the annulled and the new compensation agreement are accounted for as if they were a modification to the original compensation agreement (see section above).

The dilutive effect of outstanding share awards when calculating earnings per share (diluted) is considered as an additional dilution (for details, see disclosure 12).

## TREASURY SHARES

Any treasury shares that the Group acquires are recognized at cost and deducted from equity. The purchase, sale, issue, or withdrawal of treasury shares is not recognized in profit or loss.

## GOVERNMENT GRANTS

Government grants are recognized if there is adequate assurance that grants will be provided and that the company complies with the attached conditions. Expenditure-related grants are recognized as income on a scheduled basis over the period required to offset them against the corresponding expenses for which the grants are intended to compensate. Grants for capitalized development projects reduce the acquisition and manufacturing cost of the associated assets.

## ACTUAL INCOME TAXES

The actual tax refund claims and tax liabilities for the current period are measured at the amount expected to be recovered from, or paid to, the tax authorities. The amount is calculated based on the tax rates and tax laws applicable on the reporting date in those countries in which the Group is active and generates taxable income.

## DEFERRED TAXES

Deferred taxes are recognized on all temporary differences between the carrying amounts in the tax accounts and the consolidated financial statements. Deferred taxes on loss carry-forwards are capitalized as long as it is expected that these can be used.

The measurement of deferred taxes is based on the tax rates on the realization date that apply or are anticipated, based on the current legal situation in the individual countries. Deferred taxes that relate to items directly recognized in equity are presented in equity. Deferred tax assets and deferred tax liabilities are offset against each other if the Group has an enforceable claim for actual tax refunds to be offset against actual tax liabilities and these relate to income tax on the same tax subject that is levied by the same tax authority.

## PENSION PROVISIONS

Provisions for pensions are determined according to the projected unit credit method pursuant to IAS 19. In addition to the pensions and acquired benefits known on the balance sheet date, this method also takes expected future salary and pension increases into account. If pension obligations have been re-insured using plan assets, these are reported net.

The calculation is based on actuarial expert opinions, taking biometric calculation principles into account. Differences between the assumptions made and the trends that actually materialized or changes in assumptions for the measurement of defined benefit plans and similar obligations result in actuarial gains and losses, which have a direct impact on the consolidated balance sheet or on the statement of comprehensive income. The service cost is reported in personnel expense, the interest element of the allocation to reserves in the financial result.

## OTHER PROVISIONS

Other provisions are recognized if a past event has led to a current legal or constructive obligation to third parties, which is expected to lead to a future outflow of resources that can be reliably estimated. Reserves are generally measured at the expected settlement amount, taking into account all identifiable risks. Calculation of the settlement amount is based on best estimates. The settlement amount also includes anticipated cost increases.

Provisions for warranties are recognized in accordance with previous claims history or the estimated future level of claims. Non-current provisions are recognized at their settlement amount, discounted to the balance sheet date. The interest rate used is a pretax rate that reflects current market expectations with regard to the interest effect and the risks specific to the circumstances. The interest expense resulting from the unwinding of the discount is presented in finance costs.

Accruals are not presented under provisions, but under trade payables or other liabilities, depending on their nature.

## LIABILITIES

Long-term liabilities are recognized at amortized cost or fair value. Differences between their historical cost and their repayment amount are accounted for using the effective interest method. Short-term liabilities are recognized at their repayment or settlement amount.

## INCOME AND EXPENSES

Manz generates most of its revenues from customer-specific construction contracts. Revenues are therefore recognized primarily in accordance with IAS 11, using the percentage of completion method. In this case, revenue and expected margins are recognized in proportion to the stage of completion of a contract. The degree of completion of a project is calculated from the ratio of costs already incurred to expected total costs.

Production-related expenses are recognized upon delivery or utilization of the service, while all other expenses are recognized as an expense as incurred. Reserves for warranties are recognized at the time the products are sold. Interest and other borrowing costs are recognized as an expense in the period as long as they are not capitalized pursuant to IAS 23.

## CONTINGENCIES

A contingency is a possible obligation to third parties that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Manz Group. A contingent liability may also be a present obligation that arises from past events, but is not recognized because an outflow of resources is not probable or the amount of the obligation cannot be estimated with sufficient reliability.

## MANAGEMENT ESTIMATES AND JUDGMENTS

The preparation of consolidated financial statements requires assumptions and estimates that have an effect on the recognition, measurement, and presentation of assets, liabilities, income, and expenses, as well as contingent assets and contingent liabilities. The main circumstances affected by such discretionary judgments and estimates relate to the viability of receivables, determination of defining the percentage of completion of long-term manufacturing projects, assumptions about future cash flows from cash-generating units (CGUs), and development projects, as well as the recognition and measurement of provisions. The values that actually occur may differ from the estimates in individual cases. The carrying amounts of assets and liabilities affected by estimates can be seen in the breakdowns of the individual balance sheet items.

The assumptions and estimates are based on premises that reflect the currently available level of knowledge. Specifically, the expected future business performance is based on the circumstances known at the date of preparation of the consolidated financial statements and a realistic assessment of the future development of the global and sector-specific environment. Developments in this environment that diverge from the assumptions and that are outside the control of management may result in amounts that differ from the original estimates. The most

important future-related assumptions, as well as other sources of estimation uncertainty on the reporting date, on the basis of which there is a significant risk that a considerable adjustment will be necessary to the carrying amounts of assets and liabilities within the next fiscal year, are explained below:

**Goodwill:** The recoverability of goodwill is examined on an at least annual basis as part of an impairment test. As part of this test, estimates must be made above all in relation to future cash surpluses. To determine the recoverable amount, an appropriate discount rate needs to be selected. Any future change in the macroeconomic, industry, or company situation may lead to a reduction of the cash surpluses and/or the discount rate and thus may also result in an unscheduled impairment of goodwill.

**Development costs:** Development costs are capitalized in accordance with the disclosures in the presented accounting policies (IAS 38). For the purposes of determining the amounts to be capitalized, management has to make assumptions about the level of anticipated future cash flows from assets, the applicable discount rates, and the period of inflow from anticipated future cash flows that generate assets.

**Property, plant, and equipment:** Technical progress, a deterioration in the market situation, or damage can lead to a write-down of property, plant, and equipment.

**Assets and liabilities from construction contracts:** Receivables from construction contracts are recognized using the percentage of completion method in accordance with IAS 11. Revenue is presented according to the percentage of completion. In this case, an exact estimate of contract progress is essential for accounting purposes. The key estimates include total contract costs, total contract revenues and risks, and other assessments.

**Trade receivables and other assets:** In order to take credit risks into account, the company recognizes allowances for doubtful debts. The allowance amount here comprises estimations and evaluations of individual receivables, which in turn are based on the maturity structures of the receivable balances, the customer's credit standing, past experience pertaining to derecognition of receivables, and changes to payment terms.

**Pension provisions:** When calculating pension provisions, the choice of premises such as actuarial interest rate or trend assumptions, plus the formulation of biometric probabilities, leads to differences in comparison to the actual obligations emerging over the course of time.

**Provisions for onerous contracts:** Provisions for onerous contracts are usually recognized for disadvantageous purchase and sales agreements. A future change to the market prices on the purchase or sales side may result in the provisions for onerous contracts being adjusted.

**Accounting for acquisitions:** In the context of a share purchase, all identified assets and liabilities, as well as contingencies, are recognized at their fair value on the acquisition date, for the

purposes of the initial consolidation. Estimates are used to determine the fair market value of these assets and liabilities on the acquisition date.

Income taxes: Estimates equally need to be made with regard to the recognition of tax provisions and with regard to assessment of the recoverability of deferred taxes on loss carry-forwards. In any assessment of the recoverability of deferred taxes, there are uncertainties in relation to the interpretation of complex tax regulations and to the amount and timing of future taxable income. Deferred taxes are recognized for all unused tax loss carry-forwards to the extent it is probable that taxable income will be available to enable the loss carry-forwards to be actually utilized. When calculating the value of deferred tax assets that can be capitalized, management is required to make key judgments at their own discretion regarding the expected point in time and the value of future taxable income, as well as the future tax-planning strategies.

## CHANGES TO ACCOUNTING POLICIES

The accounting and valuation methods used are in principle the same as in the previous year. The IASB and IFRS IC have adopted the following new and revised IFRS standards and interpretations, which were applied for the first time in the 2017 financial year.

- Amendments to IAS 7, disclosure initiative
- Amendments to IAS 12, recognition of deferred tax assets and unrealized losses

The amendments do not give rise to any significant effects on the consolidated financial statements.

## PUBLISHED, ADOPTED BY THE EU BUT NOT YET APPLIED IFRS

### IFRS 9 “Financial Instruments”

With the publication of the final version of IFRS 9, the IASB in July 2014 completed its project for the replacement of IAS 39. IFRS 9 introduces a uniform approach for the classification and valuation of financial assets on the basis of their payment stream characteristics and of the business model under which they are controlled and provides a new impairment model based on expected credit losses. The standard also contains new rules for the application of hedge accounting in order to better present the risk management activities of a company, in particular in relation to the control of non-financial risks.

The new standard is applied for the first time in the financial year beginning on or after January 1, 2018; the adjustment of the previous period is waived in accordance with the transitional provisions of IFRS 9. Compared to IAS 39, there are only marginal changes in the consolidated financial statements.

**IFRS 15 “Revenues from Contracts with Customers”**

IFRS 15 was issued by the IASB in May 2014 and is applicable to reporting periods beginning on or after January 1, 2018. On April 12, 2016, clarifying changes were issued that have the same effective date as the standard itself. IFRS 15 supersedes IAS 11 Joint Arrangements, IAS 18 Revenue, and the associated interpretations. IFRS 15 establishes when and in what amount revenues are to be recognized. As a basic principle, revenue is recognized upon the transfer of goods and services in the amount of the expected consideration. IFRS 15 contains, among other things, guidelines on multiple component transactions and new rules for the treatment of service contracts and contract modifications. In addition, the new standard requires the disclosure of a series of quantitative and qualitative information in order to enable the user of the consolidated financial statements to understand the nature, amount, timing, and uncertainty of revenues and cash flows arising from contracts with customers. These amendments are first applicable in the fiscal year beginning on or after January 1, 2018. For the transition to the new standard, businesses can choose between a completely retrospective approach (with optional practical facilitation) and a modified retrospective approach. The latter permits the initial application of the standard beginning with the current reporting period without adjustment of the comparison periods, but requires additional disclosures. The company will apply the standard as of January 1, 2018 using the modified retrospective approach.

Manz AG set up a project to analyze the effects of the new regulations. The conversion to IFRS 15 will not result in material changes to the consolidated financial statements of Manz AG, as the construction contracts that are currently accounted for using the percentage of completion method will continue to meet the requirements for a period-related realization under IFRS 15. For new contract the company will analyze the requirements of IFRS 15 for a periodic revenue recognition.

A novelty from the conversion to IFRS 15 is the explicit disclosure of contract assets and liabilities. This will also result in extended quantitative and qualitative disclosures.

**IFRS 16 “Leases”**

In January 2016, the IASB published a new standard in accounting for leases. IFRS 16 replaces the previous standard IAS 17, as well as the interpretations IFRIC 4, SIC-15, and SIC-27, and is mandatory from January 1, 2019, onwards.

The standard provides a single accounting model for the lessee, and eliminates the previous classification of leases by the lessee as either finance leases or operating leases. This model causes the lessee to recognize all assets and liabilities under leases in the balance sheet, unless the term is twelve months or less, or a low value asset is involved (each is an option). The lessor continues to distinguish between finance or operating leases for accounting purposes. The accounting model of IFRS 16 does not differ significantly from that in IAS 17 Leases.



Manz appears mainly as a lessee. Thus, the conversion effect is likely to affect mainly property, plant, and equipment leased by Manz, so application of IFRS 16 will result in an increase in assets and liabilities. Manz intends to leverage its short-term and low-value assets. The Group will apply the standard for the first time from January 1, 2019. The Company is currently evaluating the quantitative effects of applying IFRS 16.

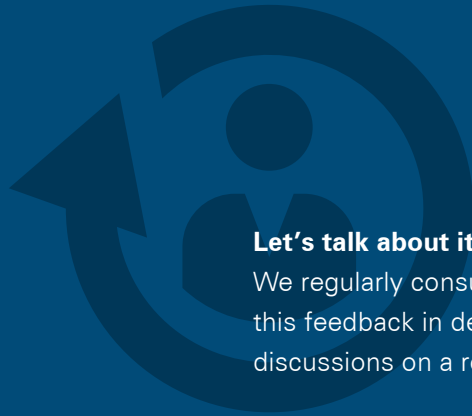
As a result of the remaining new regulations, no significant impact on the consolidated financial statements is expected as of today's perspective.

# OPINION FOR UNBIALED DIALOGUE

The identification of the various interest groups (stakeholders and shareholders) and their involvement in a continuous dialogue is a central pillar in the sustainability process of Manz AG. This dialogue not only ensures maximum transparency

in our dealings. By cultivating it in all directions and offering suitable platforms, we ensure that complex ideas and interests find their place and positively influence the further development of the company.



**Let's talk about it**

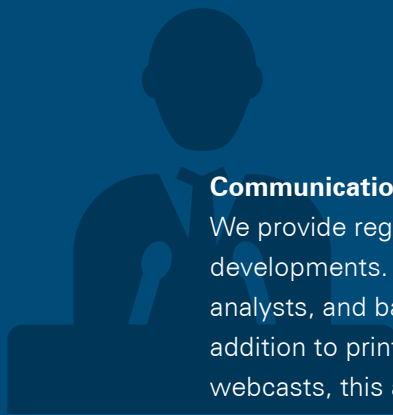
We regularly consult our employees on current topics and include this feedback in decision-making processes. Individual feedback discussions on a regular basis are also a matter of course for us.

# Feedback

# Discussion

**Insights that help everyone**

The "Innovation Forum" is an online discussion platform that is open to all employees. The focus is on key topics such as new technologies, markets, target groups, and cost savings. But general suggestions for improvement can be made at any time

**Communication on all sides**

We provide regular and timely information on all company-relevant developments. In doing so, we seek a direct dialogue with investors, analysts, and banks using the usual communication channels – in addition to print media, social media, telephone conferences, and webcasts, this also includes regular participation in capital market conferences and roadshows in Germany and abroad.

# Information

## NOTES TO THE INCOME STATEMENT

### REVENUES (1)

The breakdown of revenues by business segment and region is shown in the segment reporting. Please also refer to our comments on segment reporting in Section IV.

Total revenues include revenue from construction contracts in the amount of 307,382 thousand euros (previous year: 207,725 thousand euros)

### WORK PERFORMED BY THE ENTITY AND CAPITALIZED (2)

In fiscal year 2017, development costs for the Solar and Energy Storage segments in particular were capitalized.

### OTHER OPERATING INCOME (3)

| (in EUR tsd.)  | 2017          | 2016         |
|--|---------------|--------------|
| Income from the deconsolidation of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) | 34,356        | 0            |
| Income from the liquidation and reduction of reserves  | 203           | 2,057        |
| Liquidation of valuation allowances on receivables   | 171           | 646          |
| Subsidies  | 130           | 1,102        |
| Exchange rate gains  | 431           | 496          |
| Other  | 3,352         | 3,068        |
|  | <b>38,643</b> | <b>7,369</b> |

### COST OF MATERIALS (4)

| (in EUR tsd.)  | 2017           | 2016           |
|--|----------------|----------------|
| Cost of raw materials, consumables, and supplies, and of purchased merchandise | 203,390        | 121,592        |
| Cost of purchased services   | 19,230         | 16,840         |
|  | <b>222,620</b> | <b>138,432</b> |



## PERSONNEL EXPENSES (5)

| (in EUR tsd.)  | 2017          | 2016          |
|--|---------------|---------------|
| Wages and salaries   | 62,289        | 66,272        |
| Social security, post-employment, and other employee benefit costs | 12,228        | 12,870        |
|  | <b>74,517</b> | <b>79,142</b> |
| <b>Employees (annual average)</b>                                  |               |               |
| Manufacturing  | 950           | 977           |
| Administrative/Technical area                                      | 727           | 809           |
| Trainees   | 48            | 40            |
|  | <b>1,725</b>  | <b>1,826</b>  |

## OTHER OPERATING EXPENSES (6)

| (in EUR tsd.)  | 2017          | 2016          |
|--|---------------|---------------|
| Research-related (project-based) other expenses        | 18,315        | 991           |
| Commissions  | 9,129         | 1,905         |
| Advertising and travel expenses                        | 7,984         | 9,194         |
| Rent and leases  | 5,013         | 6,816         |
| Outgoing freight                                       | 3,259         | 4,053         |
| Other personnel-related expenses                       | 2,179         | 1,664         |
| Legal and consulting fees                              | 1,708         | 2,693         |
| Addition to other provisions                           | 1,437         | 2,727         |
| Losses on receivables and expenses from the allocation | 973           | 145           |
| Exchange rate losses                                   | 697           | 1,417         |
| Expenses from the disposal of capital assets           | 13            | 3,295         |
| Other  | 14,455        | 15,543        |
|  | <b>65,161</b> | <b>50,443</b> |

**FINANCE INCOME (7)**

| (in EUR tsd.)               | 2017 | 2016 |
|-----------------------------|------|------|
| Interest and similar income | 96   | 48   |

**FINANCE COST (8)**

| (in EUR tsd.)                            | 2017         | 2016         |
|--|--------------|--------------|
| Long-term liabilities                    | 426          | 2,155        |
| Current liabilities                      | 1,180        | 1,368        |
| Interest component of long-term reserves | 141          | 192          |
| Other interest expenses                  | 8            | 1            |
|  | <b>1,754</b> | <b>3,716</b> |

**SHARE-BASED PAYMENT (9)****Performance Share Plan**

The Group introduced a Performance Share Plan for members of the Executive Board and other eligible employees. According to the Performance Share Plan, the targets consist of the EBITDA margin and the company's growth, measured by the change in the share price between the time the subscription rights are issued and the end of the waiting period. Share awards expire if the employment is terminated or a cancellation agreement is entered into. The share awards do not earn dividends during the vesting period. Manz AG can fulfill its obligations from share awards with newly issued shares or treasury shares.

The share awards (subscription rights) are issued at the discretion of the Executive Board with the approval of the Supervisory Board – or where members of the Executive Board are involved, at the sole discretion of the Supervisory Board – in annual tranches, within a period of three months after the expiry of four weeks after the publication of the consolidated financial statements for the previous fiscal year.

In the 2017 fiscal year, 19 employees and members of the Managing Board (previous year 13) received a total of 18,451 (previous year 25,238) share awards/subscription rights. Of this 4,544 (previous year: 15,336) were attributable to the Executive Board.

The following table shows the changes to share awards/share options with the corresponding weighted average fair market values per share on the date they were granted:

|  | (in shares)                             | (in EUR)  |
|--|---|---|
|  | Share awards/<br>subscription<br>rights | Weighted<br>average fair value<br>on the grant date |
| Inventory at the beginning of the year (not vested)  | 55,462                                  | 38,98   |
| Lapsed during the reporting period                   | -10,167                                 | 84,77   |
| Granted during the reporting period                  | 18,451                                  | 22,69   |
| <b>Inventory at the end of the year (not vested)</b> | <b>63,746</b>                           | <b>32,51</b>  |

Share awards are accounted for pursuant to IFRS 2 at the fair market value of the stock awards on the date they are granted and are recognized in personnel expenses as well as in a corresponding equity increase (capital reserve). Fair market value measurement is carried out using the Black Scholes model.

Fair market value measurement is based on the following parameters:

|   | 2017   | 2016  |
|---|--------|-------|
| Strike price (in EUR)                   | 1.00   | 1.00  |
| Risk-free annual interest rate (in %)   | 0.12   | -0.66 |
| Volatility (in %)                       | 105.90 | 55.75 |
| Expected dividends (in EUR)             | 0.00   | 0.00  |
| Fair value of each share award (in EUR) | 22.69  | 12.68 |

In the reporting year, expenses of 236 thousand euros from the Performance Share Plan (previous year: 131 thousand euros) were recognized in personal expenses.



**INCOME TAXES (10)**

Income taxes include both actual and deferred income taxes arising from temporary differences and existing tax loss carry-forwards.

| (in EUR tsd.)                           | 2017         | 2016         |
|---|--------------|--------------|
| <b>Actual tax expense</b>               |              |              |
| Current period                          | 2,246        | 483          |
| Previous periods                        | 87           | -8           |
| <b>Deferred tax income/expenses (+)</b> | 363          | 2,481        |
|   | <b>2,696</b> | <b>2,956</b> |

The current income tax expense is calculated using the tax rates effective as of the balance sheet date. The domestic tax rate is 29.13% when calculating deferred taxes for domestic subsidiaries (previous year: 29.13%). Tax rates of between 15% and 25% were used for foreign subsidiaries.

The income tax expense in the reporting year in the amount of 2,636 thousand euros (previous year: 2,956 thousand euros) is derived as follows from an "expected" income tax expense that would have resulted from the application of the statutory income tax rate of the parent company to income before income taxes:

| (in EUR tsd.)                               | 2017         | 2016           |
|---|--------------|----------------|
| Earnings before income taxes                | -102         | -39,599        |
| Manz AG income tax rate                     | 29.13 %      | 29.13 %        |
| <b>Expected income tax expense</b>          | <b>-30</b>   | <b>-11,535</b> |
| International tax rate differences          | -749         | 492            |
| Change in tax rate                          | 5            | 8              |
| Non-deductible expenses                     | 547          | 2,561          |
| Prior-period taxes                          | 87           | -8             |
| Tax-free income                             | -10,803      | -651           |
| Non-recognition of tax loss carry-forwards  | 14,612       | 11,373         |
| Valuation allowances on deferred tax assets | -1,042       | 738            |
| Other                                       | 69           | -22            |
| <b>Reported income tax expense</b>          | <b>2,696</b> | <b>2,956</b>   |
| <b>Effective tax rate</b>                   | <b>n. a.</b> | <b>n. a.</b>   |

The following table shows deferred tax assets and liabilities:

| (in EUR tsd.)  | Deferred tax assets |               | Deferred tax liabilities |               |
|--|---------------------|---------------|--------------------------|---------------|
|  | Dec. 31, 2017       | Dec. 31, 2016 | Dec. 31, 2017            | Dec. 31, 2016 |
| Intangible assets                                      | 1,191               | 115           | 4,259                    | 5,312         |
| Property, plant and equipment                          | 0                   | 0             | 28                       | 29            |
| Financial investments                                  | 195                 | 0             | 0                        | 0             |
| Percentage-of-completion method                        | 3,234               | 767           | 5,309                    | 1,457         |
| Receivables  | 469                 | 271           | 3,343                    | 0             |
| Derivative financial instruments                       | 0                   | 3             | 0                        | 0             |
| Pension provisions                                     | 501                 | 981           | 0                        | 0             |
| Liabilities from goods and services                    | 2,038               | 1,004         | 993                      | 725           |
| Provisions   | 271                 | 606           | 0                        | 4             |
| Tax loss carry-forwards                                | 7,487               | 5,153         | 0                        | 0             |
| Gross value  | 15,386              | 8,900         | 13,932                   | 7,527         |
| Offsetting   | -10,452             | -5,400        | -10,452                  | -5,400        |
| <b>Balance according to consolidated balance sheet</b> | <b>4,934</b>        | <b>3,500</b>  | <b>3,480</b>             | <b>2,127</b>  |
| <b>Net amount of deferred tax assets</b>               | <b>1,454</b>        | <b>1,373</b>  |                          |               |

The increase in the net amount of deferred taxes in the amount of 80 thousand euros (previous year reduction 1,544 thousand euros) is broken down as follows:

| (in EUR tsd.)   | 2017      | 2016          |
|---|-----------|---------------|
| Deferred tax expense (-)/income in the income statement   | -363      | -2,481        |
| Change in deferred taxes recognized in other comprehensive income on actuarial gains/losses on pensions | 90        | 38            |
| Derivative financial instruments  | 1         | -638          |
| Financial assets available for sale   | 195       | 0             |
| Currency conversion   | 157       | 1,537         |
|   | <b>80</b> | <b>-1,544</b> |

Deferred taxes are recognized for tax loss carry-forwards only if there is sufficient certainty that they will be realized. Fundamentally, no deferred taxes are recognized for tax loss-carry forwards insofar as the deferred tax assets would have exceeded the deferred tax liabilities of the respective company.

The tax loss carry-forwards totaled 215,623 thousand euros as of the balance sheet date (previous year: 217,562 thousand euros). Of these, 438 thousand euros (previous year: 442

thousand euros) is limited to a period of 5 years and the remainder can be carried forward indefinitely. For loss carry forwards amounting to 184,034 thousand euros (previous year: 196,017 thousand euros), no deferred tax assets were recognized because, in the case of losses in the more recent past, IAS 12 requires high capitalization requirements that are not met by the balance sheet date.

In accordance with IAS 12, deferred taxes for temporary differences in connection with shares in Group companies must be accounted for (outside basis differences). For outside basis differences amounting to 34.0 million euros (previous year: 31.2 million euros), no deferred tax liabilities were recognized, as a reversal of the temporary differences is not expected in the foreseeable future.

## PROFIT/LOSS ATTRIBUTABLE TO MINORITY INTERESTS (11)

The minority shareholders' share of profits or losses consists of profit/loss attributed to minority interests in the amount of 345 thousand euros (previous year: 58 thousand euros). These are minority interests in Manz India Limited, Talus Manufacturing Ltd., and Suzhou Manz New Energy Equipment Co., Ltd.

## EARNINGS PER SHARE (12)

The undiluted earnings per share are calculated by dividing Manz AG shareholders' share of earnings by the weighted average number of shares in circulation during the fiscal year. The earnings per share are diluted as a result of so-called "potential shares." These include option and subscription rights if such rights result in the issue of shares at a value below the share's average stock exchange price. There was a dilution effect from the share awards in the context of the Performance Plan (see Note 9).

Earnings per share was calculated in accordance with IAS 33.

|   | 2017             | 2016             |
|---|------------------|------------------|
| Consolidated profit/loss attributable to Manz AG's consolidated net profit (in EUR) | -3,144,101       | -42,612,933      |
| Weighted average number of outstanding shares (pc.)                                 | 7,744,088        | 6,847,065        |
| Effect from share-based compensation (pc.)  | 137,880          | 141,646          |
| <b>Weighted average number of outstanding shares (diluted) (pc.)</b>                | <b>7,881,968</b> | <b>6,988,711</b> |
| Earnings per share (diluted = undiluted) (in EUR)                                   | -0.41            | -6.22            |

## NOTES TO SEGMENT REPORTING

Manz discloses the results of operations grouped by division and region in accordance with IFRS 8 (Operating Segments) within the scope of business segment reporting. This grouping is based on internal management and takes the business segments' different risk and earnings structures into account.

The "Solar" business segment includes system solutions for the manufacturing costs of thin-film solar modules and CIGS thin-film technology. Business in equipment for the production of lithium-ion batteries is reported in the "Energy Storage" business segment. The "Electronics" business segment focuses on the manufacture of production equipment for the manufacture of consumer electronics.

The two reporting segments, "Contract Manufacturing" (equipment and parts production and assembly work for customers in various industries) and the new "Service" reporting segment, which was created in fiscal year 2017 and which offers services relating to Manz AG's core technological expertise. The previous year's figures in the segment reporting were adjusted in accordance with the current reporting structure.

The primary factor used to evaluate and control a segment's cash flow is operating profit (EBIT).

Segment reporting shows revenues and profits in the Group's individual segments. Delivery and service relationships exist only to a limited extent between the individual segments. These are consolidated within segments. The exchange of services between the segments is carried out at market prices.

In the Solar segment, revenue was generated in the amount of 85,032 thousand euros (previous year: 0 euros) with one customer, and in the Contract Manufacturing segment revenues in the amount of 84,482 thousand euros (previous year: 41,325 thousand euros), each with one customer.

## SEGMENT REPORTING

As of Dec. 31, 2017

| (in EUR tsd.)                |                |               |                |                        |               |               |                |
|------------------------------|----------------|---------------|----------------|------------------------|---------------|---------------|----------------|
|                              | Solar          | Electronics   | Energy Storage | Contract Manufacturing | Service       | Consolidation | Group          |
| Revenues with third parties  |                |               |                |                        |               |               |                |
| <b>2016</b>                  | 20,982         | 91,124        | 46,230         | 49,355                 | 23,319        | 0             | 231,010        |
| <b>2017</b>                  | 104,344        | 87,908        | 23,831         | 91,544                 | 17,340        | 0             | 324,967        |
| Revenues with other segments |                |               |                |                        |               |               |                |
| <b>2016</b>                  | 0              | 0             | 0              | 0                      | 0             | 0             | 0              |
| <b>2017</b>                  | 0              | 3,411         | 0              | 0                      | 0             | -3,411        | 0              |
| Total revenues               |                |               |                |                        |               |               |                |
| <b>2016</b>                  | <b>20,982</b>  | <b>91,124</b> | <b>46,230</b>  | <b>49,355</b>          | <b>23,319</b> | <b>0</b>      | <b>231,010</b> |
| <b>2017</b>                  | <b>104,344</b> | <b>91,319</b> | <b>23,831</b>  | <b>91,544</b>          | <b>17,340</b> | <b>-3,411</b> | <b>324,967</b> |
| EBITDA                       |                |               |                |                        |               |               |                |
| <b>2016</b>                  | -7,395         | -10,395       | -13,132        | 2,149                  | 6,996         | 0             | -21,777        |
| <b>2017</b>                  | 33,769         | -13,393       | -20,397        | 6,033                  | 5,763         | -324          | 11,451         |
| Depreciation                 |                |               |                |                        |               |               |                |
| <b>2016</b>                  | 6,015          | 3,972         | 2,941          | 993                    | 233           | 0             | 14,154         |
| <b>2017</b>                  | 2,817          | 3,577         | 2,325          | 1,050                  | 126           | 0             | 9,895          |
| EBIT                         |                |               |                |                        |               |               |                |
| <b>2016</b>                  | -13,410        | -14,367       | -16,073        | 1,156                  | 6,763         | 0             | -35,931        |
| <b>2017</b>                  | 30,952         | -16,970       | -22,722        | 4,983                  | 5,637         | -324          | 1,556          |

## SEGMENT REPORTING FOR REGIONS

As of Dec. 31, 2017

| (in EUR tsd.)         | Third-party revenues<br>by customer location | Non-current assets<br>(without deferred taxes) |
|-----------------------|--|--|
| <b>Germany</b>        |  |  |
| 2016                  | 29,538                                       | 40,408   |
| 2017                  | 24,752                                       | 47,285   |
| <b>Rest of Europe</b> |  |  |
| 2016                  | 36,179                                       | 20,890   |
| 2017                  | 34,492                                       | 21,123   |
| <b>China</b>          |  |  |
| 2016                  | 89,150                                       | 16,297   |
| 2017                  | 180,833                                      | 14,405   |
| <b>Taiwan</b>         |  |  |
| 2016                  | 35,289                                       | 38,876   |
| 2017                  | 16,086                                       | 38,050   |
| <b>Rest of Asia</b>   |  |  |
| 2016                  | 8,934  | 0  |
| 2017                  | 10,119                                       | 11   |
| <b>USA</b>            |  |  |
| 2016                  | 31,856                                       | 64   |
| 2017                  | 58,298                                       | 40   |
| <b>Other Regions</b>  |  |  |
| 2016                  | 64   | 0  |
| 2017                  | 387  | 0  |
| <b>Group</b>          |  |  |
| 2016                  | 231,010                                      | 116,535  |
| 2017                  | 324,967                                      | 120,914  |

## NOTES TO THE CASH FLOW STATEMENT (13)

The cash flow statement shows how cash has changed in the Manz Group over the course of the reporting year due to cash inflows and outflows. Pursuant to IAS 7 (statements of cash flows), a distinction is drawn between cash flows from operating, investing, and financing activities. Effects from changes to the basis of consolidation and exchange rates are eliminated in the respective items. The change in liquid assets due to changes in exchange rates is presented separately.

The cash and cash equivalents reported in the cash flow statement comprise all cash and cash equivalents shown in the balance sheet, consisting of cash in hand and bank deposits with a maturity of up to three months and only insignificant fluctuations in value, adjusted for the unavailable amount of funds due to securing down payment guarantees of 16.6 million euros.

The cash inflows and outflows from investing and financing activities are presented in accordance with the direct method. Cash inflows and outflows from investing activities in operating business comprise inflows to property, plant, and equipment and intangible assets. Cash payments for the acquisition of subsidiaries are reduced by the transferred liquid funds. In financing activities, besides cash inflows from equity increases and the issuance of other financial liabilities, cash outflows from the repayment of loans are also presented. In contrast, the cash inflow and outflow from operating activities is derived indirectly, starting from earnings before interest and taxes (EBIT). For this purpose, EBIT is adjusted by non-cash expenses and income, which primarily involve depreciation and changes in non-current provisions and deferred taxes, and amended to include changes in operating assets and liabilities.

Investing and financing processes which have not led to a change in cash are not part of the cash flow statement.

## NOTES TO THE BALANCE SHEET

### INTANGIBLE ASSETS (14)

| (in EUR tsd.)   | Licenses,<br>software, and<br>similar rights | Capitalized<br>development<br>costs | Goodwill      | Plants under<br>construction/<br>Advance<br>payments | Total          |
|---|--|-------------------------------------|---------------|--|----------------|
| <b>Acquisition/manufacturing costs</b>                      |  |                                     |               |  |                |
| <b>As of January 1, 2016</b>                                | <b>53,292</b>                                | <b>85,959</b>                       | <b>37,952</b> | <b>60</b>  | <b>177,263</b> |
| Currency adjustment   | 38   | 169                                 | 1,376         | 0  | 1,583          |
| Additions   | 749  | 4,918                               | 0             | 0  | 5,667          |
| Disposals   | -57  | -3,859                              | 0             | 0  | -3,916         |
| Reclassifications   | 94   | 0                                   | 0             | -59  | 35             |
| <b>As of December 31, 2016</b>                              | <b>54,116</b>                                | <b>87,187</b>                       | <b>39,328</b> | <b>1</b>   | <b>180,632</b> |
| <b>Depreciation</b>   |  |                                     |               |  |                |
| <b>As of January 1, 2016</b>                                | <b>33,085</b>                                | <b>62,604</b>                       | <b>0</b>      | <b>0</b>   | <b>95,689</b>  |
| Currency adjustment   | 37   | 77                                  | 0             | 0  | 114            |
| Additional depreciation (scheduled)                         | 4,911  | 2,525                               | 0             | 0  | 7,436          |
| Additional impairments (unscheduled)                        | 0  | 426                                 | 0             | 0  | 426            |
| Disposals   | -57  | -772                                | 0             | 0  | -829           |
| <b>As of December 31, 2016</b>                              | <b>37,976</b>                                | <b>64,860</b>                       | <b>0</b>      | <b>0</b>   | <b>102,836</b> |
| <b>Acquisition/manufacturing costs</b>                      |  |                                     |               |  |                |
| <b>As of January 1, 2017</b>                                | <b>54,116</b>                                | <b>87,187</b>                       | <b>39,328</b> | <b>1</b>   | <b>180,632</b> |
| Currency adjustment   | -36  | -192                                | -1,292        | 0  | -1,520         |
| Changes to the basis of consolidation                       | -22,693                                      | -21,453                             | -4,705        | 0  | -48,851        |
| Additions   | 1,292  | 8,176                               | 0             | 0  | 9,468          |
| Disposals   | -364   | -3,773                              | 0             | 0  | -4,137         |
| Reclassifications   | -8   | 0                                   | 0             | -1   | -9             |
| <b>As of December 31, 2017</b>                              | <b>32,307</b>                                | <b>69,945</b>                       | <b>33,331</b> | <b>0</b>   | <b>135,583</b> |
| <b>Depreciation</b>   |  |                                     |               |  |                |
| <b>As of January 1, 2017</b>                                | <b>37,976</b>                                | <b>64,860</b>                       | <b>0</b>      | <b>0</b>   | <b>102,836</b> |
| Currency adjustment   | -37  | -45                                 | 0             | 0  | -82            |
| Changes to the basis of consolidation                       | -14,913                                      | -11,729                             | 0             | 0  | -26,642        |
| Additional depreciation (scheduled)                         | 2,926  | 1,952                               | 0             | 0  | 4,878          |
| Disposals   | -363   | -3,773                              | 0             | 0  | -4,136         |
| <b>As of December 31, 2017</b>                              | <b>25,589</b>                                | <b>51,265</b>                       | <b>0</b>      | <b>0</b>   | <b>76,854</b>  |
| Residual carrying amount<br>as of December 31, 2016         | 16,140                                       | 22,327                              | 39,328        | 1  | 77,796         |
| <b>Residual carrying amount<br/>as of December 31, 2017</b> | <b>6,718</b>                                 | <b>18,680</b>                       | <b>33,331</b> | <b>0</b>   | <b>58,729</b>  |



In the context of our annual review of capitalized development costs for projects with residual carrying amounts, no additional write-downs (previous year: 426 thousand euros) were charged in the reporting period.

The following amounts were offset in profit or loss:

| (in EUR tsd.)   | 2017           | 2016           |
|---|----------------|----------------|
| Total research and development costs                      | -20,056        | -22,478        |
| Scheduled depreciation on development costs               | -1,952         | -2,525         |
| Unscheduled impairment on development costs               | 0              | -426           |
| Book losses from outflow of capitalized development costs | 0              | -3,087         |
| Capitalized development costs                             | 9,478          | 7,733          |
| <b>Research and development costs offset as expenses</b>  | <b>-12,530</b> | <b>-20,783</b> |

## GOODWILL AND TRADEMARK RIGHTS

The goodwill values and intangible assets with an indefinite useful life (trademark rights) are attributable to the individual segments as follows:

| (in EUR tsd.)          | Goodwill      |               | Trademark rights |              |
|------------------------|---------------|---------------|------------------|--------------|
|                        | 31.12.2017    | 31.12.2016    | 31.12.2017       | 31.12.2016   |
| Solar                  | 16,342        | 21,234        | 1,777            | 1,860        |
| Electronics            | 10,307        | 11,412        | 2,664            | 2,791        |
| Energy Storage         | 6,682         | 6,682         | 0                | 0            |
| Contract Manufacturing | 0             | 0             | 0                | 0            |
| Service                | 0             | 0             | 0                | 0            |
|                        | <b>33,331</b> | <b>39,328</b> | <b>4,441</b>     | <b>4,651</b> |

The changes in goodwill result mainly from the sale of NICE Solar Energy GmbH (former: Manz CIGS Technology GmbH) and, in the case of brand rights, solely from currency conversion.

The recoverability of goodwill and trademark rights is tested at least once a year by comparing the carrying amounts of their respective underlying units with their value in use. Value in use is determined using the discounted cash flow method. The starting point is the current three-year plan for the respective business segment.

The planning assumptions include in particular the expected market development in relation to the development of the Manz Group, the development of material production and other costs, the discounting factor and the growth rates. General market forecasts, current developments and past experience are taken into account in establishing the assumptions.

Cash flows are predicted individually for each business segment that has goodwill and trademark rights attributed to it on the basis of revenue and cost planning. Growth rates remained unchanged, and were applied using values from 1.0% to 1.5%. The pre-tax discount rate used for control (weighted average capital costs (WACC)) ranged from 8.2% to 10.7% (previous year: 7.7% to 10.1%). In this context, the cost of equity is calculated on the basis of a comparable group (peer group). The discount rates and growth rates are listed in the following table:

| (in %)                 | Discount rate before taxes |               | Growth rate   |               |
|------------------------|----------------------------|---------------|---------------|---------------|
|                        | Dec. 31, 2017              | Dec. 31, 2016 | Dec. 31, 2017 | Dec. 31, 2016 |
| Solar                  | 10.7                       | 10.1          | 1.5           | 1.5           |
| Electronics            | 8.2                        | 7.7           | 1.5           | 1.5           |
| Energy Storage         | 8.4                        | 8.1           | 1.0           | 1.0           |
| Contract Manufacturing | 9.4                        | 8.9           | 1.0           | 1.0           |
| Service                | 10.7                       | 10.1          | 1.0           | 1.0           |

Equity and borrowing cost rates calculated in this way were weighted on the basis of the peer group's average capital structure.

Goodwill is considered impaired when a segment's carrying amount exceeds its value in use. For the 2017 and 2016 fiscal years, there was no need to recognize impairments of the capitalized goodwill or intangible assets with an indefinite useful life.

A WACC that is 1% higher and a calculation without assumed growth in perpetuity does not influence the intrinsic value of goodwill. Even a subsequent additional 10% reduction of the EBIT margin over the entire planning period would not have led to an impairment of goodwill or trademark rights in fiscal year 2017 and 2016.

## PROPERTY, PLANT, AND EQUIPMENT (15)

| (in EUR tsd.)   | Land and buildings | Technical equipment and machinery | Other equipment, operating and office equipment | Equipment under construction/ Advance payments | Total         |
|---|--------------------|-----------------------------------|---|--|---------------|
| <b>Acquisition/manufacturing costs</b>                  |                    |                                   |   |  |               |
| <b>As of January 1, 2016</b>                            | <b>35,422</b>      | <b>26,557</b>                     | <b>13,196</b>                                   | <b>1,522</b>                                   | <b>76,697</b> |
| Currency adjustment                                     | 47                 | 51                                | 31  | 2  | 131           |
| Additions   | 362                | 856                               | 871   | 1,286  | 3,375         |
| Disposals   | -772               | -1,585                            | -2,349  | -89  | -4,795        |
| Reclassifications                                       | 1,511              | 1,069                             | 6   | -2,622   | -36           |
| <b>As of December 31, 2016</b>                          | <b>36,570</b>      | <b>26,948</b>                     | <b>11,755</b>                                   | <b>99</b>                                      | <b>75,371</b> |
| <b>Depreciation</b>                                     |                    |                                   |   |  |               |
| <b>As of January 1, 2016</b>                            | <b>6,193</b>       | <b>19,174</b>                     | <b>8,500</b>                                    | <b>0</b>                                       | <b>33,867</b> |
| Currency adjustment                                     | 73                 | 23                                | 58  | 0  | 154           |
| Additional depreciation (scheduled)                     | 1,818              | 2,441                             | 1,253   | 0  | 5,512         |
| Additional depreciation (unscheduled)                   | 0                  | 0                                 | 765   | 0  | 765           |
| Disposals   | -854               | -1,437                            | -2,030  | 0  | -4,321        |
| <b>As of December 31, 2016</b>                          | <b>7,230</b>       | <b>20,201</b>                     | <b>8,546</b>                                    | <b>0</b>                                       | <b>35,977</b> |
| <b>Acquisition/manufacturing costs</b>                  |                    |                                   |   |  |               |
| <b>As of January 1, 2017</b>                            | <b>36,570</b>      | <b>26,948</b>                     | <b>11,755</b>                                   | <b>99</b>                                      | <b>75,371</b> |
| Currency adjustment                                     | -1,624             | -153                              | -266  | -4   | -2,047        |
| Changes to the basis of consolidation                   | -569               | -2,584                            | -284  | -1   | -3,438        |
| Additions   | 686                | 469                               | 1,237   | 3,852  | 6,244         |
| Disposals   | -87                | -887                              | -949  | -99  | -2,022        |
| Reclassifications                                       | 34                 | -101                              | 101   | -34  | 0             |
| <b>As of December 31, 2017</b>                          | <b>35,010</b>      | <b>23,692</b>                     | <b>11,594</b>                                   | <b>3,813</b>                                   | <b>74,108</b> |
| <b>Depreciation</b>                                     |                    |                                   |   |  |               |
| <b>As of January 1, 2017</b>                            | <b>7,230</b>       | <b>20,201</b>                     | <b>8,546</b>                                    | <b>0</b>                                       | <b>35,977</b> |
| Currency adjustment                                     | -336               | -97                               | -187  | 0  | -620          |
| Changes to the basis of consolidation                   | -22                | -2,361                            | -145  | 0  | -2,528        |
| Additional depreciation (scheduled)                     | 1,435              | 2,269                             | 1,313   | 0  | 5,017         |
| Disposals   | -36                | -887                              | -885  | 0  | -1,808        |
| <b>As of December 31, 2017</b>                          | <b>8,271</b>       | <b>19,125</b>                     | <b>8,642</b>                                    | <b>0</b>                                       | <b>36,038</b> |
| Residual carrying amount as of December 31, 2016        | 29,340             | 6,747                             | 3,209   | 99   | 39,395        |
| <b>Residual carrying amount as of December 31, 2017</b> | <b>26,739</b>      | <b>4,567</b>                      | <b>2,952</b>                                    | <b>3,813</b>                                   | <b>38,070</b> |

Land and buildings of Manz Slovakia s.r.o, at 3,774 thousand euros (previous year: 4,009 thousand euros), are used as collateral for bank loans.

No extraordinary write-downs were applied during the reporting year (previous year: 765 thousand euros).

## FINANCIAL ASSETS (16)

Manz AG acquired a 15% stake in NICE PV Research Ltd. Beijing, China, in fiscal year 2017. The acquisition cost amounted to 24,245 thousand euros. The fair value as of the balance sheet date amounts to 23,575 thousand euros.

## INVENTORIES (17)

| (in EUR tsd.)                           | 31.12.2017    | 31.12.2016    |
|---|---------------|---------------|
| Raw materials, consumables and supplies | 24,062        | 16,435        |
| Work in progress                        | 19,859        | 16,603        |
| Finished goods and merchandise          | 12,754        | 15,349        |
| Prepayments                             | 5,484         | 563           |
|   | <b>62,159</b> | <b>48,950</b> |

The total value of inventory allowances includes currency fluctuation and consumptions and decreased to 15,421 thousand euros (previous year: 31,260 thousand euros). Addition to inventory allowances are recognized through profit and loss. In year 2017 a loss of 3,200 thousand euros (previous year: 1,979 thousand euros) was recognized.

The carrying amount of inventories at net realizable value amounts to 14,600 thousand euros (previous year: 17,233 thousand euros).

Inventory in the amount of 10,647 thousand euros are pledged as securities.

**TRADE RECEIVABLES (18)**

| (in EUR tsd.)                                  | Dec. 31, 2017 | Dec. 31, 2016 |
|--|---------------|---------------|
| Future receivables from construction contracts | 48,518        | 33,330        |
| Trade accounts receivable                      | 47,191        | 44,396        |
|  | <b>95,709</b> | <b>77,726</b> |

Future receivables from construction contracts, accounted for in accordance with their percentage of completion, are determined as follows:

| (in EUR tsd.)   | Dec. 31, 2017 | Dec. 31, 2016 |
|---|---------------|---------------|
| Manufacturing costs, including profit or loss on the construction contracts | 173,815       | 78,703        |
| Minus advances payments received  | -125,297      | -45,373       |
|   | <b>48,518</b> | <b>33,330</b> |

Where advances received exceed the total of contract costs incurred and profits reported, such advances are accounted for on the liabilities side under "Advances received."

| (in EUR tsd.)   | Dec. 31, 2017  | Dec. 31, 2016 |
|---|----------------|---------------|
| Manufacturing costs, including profit or loss on the construction contracts | 25,765         | 55,275        |
| Minus advances payments received  | -39,160        | -65,102       |
|   | <b>-13,395</b> | <b>-9,827</b> |

| (in EUR tsd.)                           | Dec. 31, 2017 | Dec. 31, 2016 |
|---|---------------|---------------|
| <b>Specific valuation allowances</b>    |               |               |
| Trade accounts receivable               | 2,932         | 1,340         |
| Receivables from construction contracts | 0             | 96            |
| Flat-rate specific valuation allowances | 24            | 2,096         |
|   | <b>2,956</b>  | <b>3,532</b>  |

Changes in valuation allowances were as follows:

| (in EUR tsd.)            | Dec. 31, 2017 | Dec. 31, 2016 |
|--------------------------|---------------|---------------|
| <b>As of January 1</b>   | <b>3,532</b>  | <b>4,082</b>  |
| Currency conversion      | -106          | 418           |
| Utilization              | 436           | 418           |
| Liquidation              | 171           | 646           |
| Addition                 | 137           | 96            |
| <b>As of December 31</b> | <b>2,956</b>  | <b>3,532</b>  |

## DERIVATIVE FINANCIAL INSTRUMENTS (19)

On the balance sheet date, the following forward exchange transactions were used within hedge accounting to hedge the exchange rate of USD/TWD transactions and interest rate derivatives anticipated in the course of the following fiscal year:

| (in EUR tsd.)       | Dec. 31, 2017    |                           | Dec. 31, 2016    |                           |
|---------------------|------------------|---------------------------|------------------|---------------------------|
|                     | Currency hedging | Interest rate derivatives | Currency hedging | Interest rate derivatives |
| Nominal value       | 4,173            | 2,850                     | 9,501            | 1,800                     |
| Positive fair value | 29               | 0                         | 0                | 0                         |
| Negative fair value | 0                | -7                        | -158             | 0                         |
| Remaining term      | max. 05/2018     | max. 12/2019              | max. 04/2017     | max. 12/2019              |

In the current financial year it was 1 thousand euros (previous year: 8 thousand euros), minus deferred taxes of 0 thousand euros (previous year: 2 thousand euros), from current cash flow hedges, taken directly out of accumulated other equity.

**OTHER CURRENT ASSETS (20)**

| (in EUR tsd.)                                  | Dec. 31, 2017 | Dec. 31, 2016 |
|--|---------------|---------------|
| Tax receivables (not income taxes)             | 5,658         | 3,983         |
| Personnel receivables                          | 510           | 769           |
| Other deferrals (primarily insurance policies) | 593           | 645           |
| Other  | 5,509         | 2,254         |
|  | <b>12,270</b> | <b>7,651</b>  |

Other short-term receivables are neither past due nor impaired.

**CASH AND CASH EQUIVALENTS (21)**

Cash and cash equivalents include cash on hand, cash accounts, and short-term bank deposits. The book value of these assets corresponds to their fair value. In the case of the cash accounts, there are restraints on the securing of advance payment guarantees amounting to 16,634 thousand euros (previous year: 0 thousand euros).

**EQUITY (22)**

Changes in the equity and comprehensive income are presented separately in the "Consolidated Statement of Changes in Equity" (Appendix 5). The components of comprehensive income are presented in aggregate form in the income statement.

**SUBSCRIBED CAPITAL**

The capital stock of the parent company, Manz AG, is reported as subscribed capital.

The subscribed capital of 7,744,088.00 is divided into 7,744,088 no-par-value bearer shares.

**AUTHORIZED CAPITAL**

Through a resolution passed at the Annual General Meeting held on July 12, 2016, the Executive Board was authorized, with the approval of the Supervisory Board, to increase the company's capital stock to a total of 3,872,044.00 euros by issuing a total of 3,872,044 new bearer shares (no-par-value shares) against cash or contributions in kind (authorized

capital 2016) in the period preceding July 11, 2021. In principle, the new shares must be offered for subscription to shareholders. However, the Executive Board is authorized, with Supervisory Board approval, to exclude shareholders' subscription rights in certain cases.

## CONDITIONAL CAPITAL I

At the Annual General Meeting on July 9, 2014, a resolution was passed authorizing the Executive Board, with Supervisory Board approval, to issue bearer warrant or convertible bonds, profit-sharing rights and/or profit-sharing bonds, or a combination of these instruments (collectively referred to as "bonds"), up to a total nominal value of 150 million euros, on one or more occasions until July 8, 2019. In addition, the Executive Board was also authorized to grant owners of warrant bonds option rights and owners of convertible bonds, conversion rights for bearer shares of the company with a proportionate amount of capital stock totaling up to 1,971,223.00 euros, in accordance with the detailed terms and conditions of the warrant/convertible bonds.

The Executive Board is, however, authorized, with Supervisory Board approval, to exclude fractional amounts from shareholders' subscription rights and also to exclude the shareholders' subscription rights to the extent that is necessary in order to give owners of already issued bonds with option rights or conversion rights and/or conversion obligations a subscription right to the extent to which they would be entitled after exercising their option or conversion rights or upon fulfilling their conversion obligation. The Executive Board is further authorized, with Supervisory Board approval, to completely exclude shareholders' subscription rights to bonds carrying option and/or conversion rights or conversion obligations. To the extent that profit-sharing rights or profit-sharing bonds without option rights or conversion rights/obligations are issued, the Executive Board is authorized, with Supervisory Board approval, to exclude the shareholders' subscription right if these profit-sharing rights or profit-sharing bonds are designed similar to a debenture.

Pursuant to Article 3(4) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to 1,971,223.00 euros through the issue of 1,971,223 no-par value bearer shares (Conditional Capital I). This conditional increase in capital serves to grant no-par value bearer shares to the owners of warrant or convertible bonds, profit-sharing rights, or profit-sharing bonds (or a combination of these instruments), each with option or conversion rights and/or conversion obligations, which are issued as a result of the aforementioned authorization. The new shares are issued at the option or conversion price to be determined in each case in accordance with the aforementioned authorization resolution.



## CONDITIONAL CAPITAL II

At the Annual General Meeting held on Tuesday, July 7, 2015, authorization to grant stock options as set out in the Manz Performance Share Plan 2015 was approved.

The Executive Board was authorized to issue a total of up to 59,000 subscription rights for a total of up to 118,000 shares of company stock to executives of affiliated companies, Manz's own managers below the executive level, and managers of affiliated companies, both domestic and foreign, one or more times with Supervisory Board approval in the period until June 30, 2020.

Furthermore, the Supervisory Board was given authorization to issue a total of up to 56,000 subscription rights for subscription of a total of up to 112,000 shares of company stock to members of Manz's Executive Board, on one or more occasions, until June 30, 2020. The subscription rights will be granted, arranged, and exercised in accordance with the provisions defined in the resolution passed at the Annual General Meeting on July 7, 2015.

Pursuant to Article 3(5) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to 230,000.00 euros through the issue of up to 230,000 no-par value bearer shares (Conditional Capital II). This conditional increase serves to secure the rights of the owners of subscription rights granted as a result of the aforementioned authorization.

A total of 58,552 subscription rights from Conditional Capital II was issued as of the balance sheet date (previous year: 40,101) (see Annotation 9).

## CONDITIONAL CAPITAL IV

At the Annual General Meeting held on June 19, 2012, authorization to grant stock options as set out in the Manz Performance Share Plan 2012 was approved. The authorizations were revoked by a resolution passed at the Annual General Meeting of July 7, 2015, insofar as no subscription rights had been issued on the basis of the authorization.

Pursuant to Article 3(7) of the Articles of Incorporation, the company's capital stock has been conditionally increased by up to 256,000.00 euros through the issue of up to 256,000 no-par value bearer shares (Conditional Capital IV). This conditional increase serves to secure the rights of the owners of subscription rights granted as a result of the aforementioned authorization.

A total of 5,194 subscription rights from Conditional Capital IV were issued as of the balance sheet date (previous year: 15,361) (see Annotation 9).

## CAPITAL RESERVES

Capital reserves are comprised primarily of contributions from shareholders pursuant to Section 272(2), no. 1 of the German Commercial Code, minus financing costs after taxes. Furthermore, this also includes the value of share-based compensation granted to management (including the Executive Board) as a salary component in the form of equity instruments.

## TREASURY SHARES

In a resolution passed at the Annual General Meeting on July 7, 2015, the company was authorized to purchase its own shares up to a computed value of 10 % of the company's capital stock as of the day of the meeting pursuant to Section 71(1), no. 8 of the German Stock Corporation Act. The resolution grants the company authorization to execute these purchases until July 6, 2020.

Purchases may be made through the stock exchange or through a public purchase offer that is directed at all shareholders. The Managing Board is authorized to use company shares which are or were purchased as a result of this authorization or earlier authorizations for all purposes allowed by law. The authorization to purchase the company's own shares, to retire these shares, and to resell or utilize these shares in other ways can be exercised once or more than once, individually, or in conjunction with one another as well as only in parts. Shareholders' statutory subscription rights to these shares are exempted insofar as these shares are to be used in accordance with the aforementioned authorizations.

In the 2017 fiscal year, the company purchased 251 of its own shares (previous year: 271) at an average price of 34.32 euros (previous year: 35.50 euros) per share with a market value of 9 thousand euros (previous year: 10 thousand euros). The company purchased its own shares in the reporting period for employee anniversaries. As of December 31, 2017, the company has no further treasury shares in its portfolio.

## RETAINED EARNINGS

Retained earnings include the results achieved in the past by the companies included in the consolidated financial statements, insofar as they have not been distributed.

## OTHER COMPREHENSIVE INCOME

Accumulated other equity includes reserves for the revaluation of pensions, hedging of cash flows, valuation of assets held for sale and currency translation from the translation of the financial statements of foreign subsidiaries.

## MINORITY INTERESTS

The minority interests relate to Manz India Private Limited, in which Manz Asia Ltd. holds 75 % of Talus Manufacturing Ltd., in which Manz Taiwan Ltd. holds 80.5 % of the shares, as well as Suzhou Manz New Energy Equipment Co., Ltd., founded in 2017, in which Manz AG holds 56 % of the shares. The share of equity and annual profit/loss attributed to the minority shareholders is disclosed separately in the balance sheet and/or income statement.

## PROPOSED APPROPRIATION OF PROFITS

Pursuant to Section 58(2) of the German Stock Corporation Act, the distribution of dividends by Manz AG is based on the net earnings disclosed in the annual financial statements (individual financial statement) dated December 31, 2017. The annual financial statements for Manz AG for the year ending December 31, 2017, close with a net loss of 4,752,842.50 euros ( previous year: –5,355,323.22 euros). The Executive Board recommends that this loss is carried forward to a new account.

The Executive Board and Supervisory Board have defined a minimum equity ratio of 40 % and gearing of less than 50 % as targets.

| (in TEUR)                                | Dec. 31, 2017  | Dec. 31, 2016  |
|--|----------------|----------------|
| Cash and cash equivalents                | 72,209         | 55,722         |
| Financial liabilities                    | 40,305         | 54,426         |
| Net financial liabilities                | –31,904        | –1,296         |
| <b>Total Manz AG shareholders equity</b> | <b>157,804</b> | <b>160,519</b> |
| Equity ratio                             | 44.36%         | 52.90%         |
| Gearing                                  | –20.2%         | –0.8%          |

As a result of the higher level of cash and cash equivalents, the simultaneously declining financial liabilities will be fully covered and the net financial liabilities will therefore have an excess of 31,904 thousand euros.

The equity ratio declined compared to the previous year, as the balance sheet total increased significantly over the previous year due to the processing of the CIGS order.

Despite a slight decline in equity, gearing improved significantly to –20.2 % due to the significant decline in net financial liabilities (previous year: –0.8%).

## LONG-TERM FINANCIAL LIABILITIES (23)

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| (in EUR tsd.)                    | Dec. 31, 2017 | Dec. 31, 2016 |
|----------------------------------|---------------|---------------|
| Non-current liabilities to banks | 3,332         | 2,036         |

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The long-term financial liabilities consist of long-term loans from Manz Italy s.r.l., Manz Slovakia s.r.o., and Manz Hungary Kft.

## PENSION PROVISIONS (24)

The components of expenses for pension benefits recognized in the Group's income statement and the amounts carried in the balance sheet are presented in the following tables.

The present value of performance-based obligations at the end of the year is balanced against the plan assets at fair market value (financing status).

**Pension Provisions**

| (in EUR tsd.)   | 2017         | 2016         |
|---|--------------|--------------|
| <b>Change in the present value of benefits</b>                                  |              |              |
| <b>Present value of performance-based obligations as of Jan. 1</b>              | <b>8,232</b> | <b>8,938</b> |
| Changes to the basis of consolidation   | -234         | 0            |
| Departure   | -478         | 0            |
| Service cost  | 18           | 52           |
| Interest cost   | 134          | 180          |
| Benefits paid   | -399         | -1,138       |
| Actuarial losses (+) / gains (-)  |              |              |
| due to changes in demographic assumptions                                       | -19          | 2            |
| due to changes in financial assumptions   | 594          | 217          |
| due to adjustments based on past experience                                     | 12           | -154         |
| Currency differences from international plans                                   | -85          | 135          |
| <b>Present value of performance-based obligations at Dec. 31</b>                | <b>7,775</b> | <b>8,232</b> |
| <b>Change in plan assets</b>  |              |              |
| <b>Value of plan assets as of Jan. 1</b>  | <b>528</b>   | <b>1,101</b> |
| Income from plan assets   | 11           | 19           |
| Company contributions   | 64           | 325          |
| Benefits paid   | -105         | -671         |
| Departure   | -143         | 0            |
| Actuarial losses (+) / gains (-)  | 1            | -296         |
| Currency differences from international plans                                   | -16          | 50           |
| <b>Value of plan assets as of Dec. 31</b>                                       | <b>340</b>   | <b>528</b>   |
| <b>Financing status (=pension provision)</b>                                    | <b>7,435</b> | <b>7,704</b> |
| which apply to:   |              |              |
| Manz AG, Reutlingen   | 3,882        | 4,259        |
| Manz Italy s.r.l., Sasso Marconi/Italy  | 1,656        | 1,668        |
| Manz Taiwan Ltd., Chungli/Taiwan  | 1,772        | 1,460        |
| Talus Manufacturing Ltd., Chungli/Taiwan  | 125          | 83           |
| NICE Solar Energy GmbH<br>(formerly Manz CIGS Technology GmbH), Schwäbisch Hall | 0            | 234          |

The pension obligations of Manz AG consist of a single commitment with a constant amount as well as an occupational pension scheme of the former Manz Tübingen GmbH, which was closed for new acquisitions from July 15, 1997.

The obligations at Manz Italy include the statutory compensation for the separation of employees in each employment relationship.

Manz Taiwan has both a performance-based and contribution-based pension plan for its employees. Employees hired after July 1, 2005, can only select the contribution-based

pension plan. Those employed before July 1, 2005, can choose between the two pension plans.

The following amounts have been included in the income statement:

| (in EUR tsd.)     | 2017 | 2016 |
|-------------------|------|------|
| Service cost      | -18  | -52  |
| Net interest cost | -123 | -161 |

The service cost is reported in personnel expenses, while the interest cost is reported under financial expenses.

In the coming fiscal year, employer contributions to the fund's assets are expected to total 6 thousand euros and pension payments are expected to total 626 thousand euros.

The plan assets for German pension obligations consist exclusively of reinsurance policies. The plan assets for Manz Taiwan Ltd. are endowments stipulated by law that must be paid into an external central trust (Taiwan's Labor Pension Fund). The fund's assets comprise reinsurance policies (Germany) and trust assets (Taiwan), which make up 20 % and 80 % of the fund's total assets, respectively.

For contribution-based pension plans, payments were made totaling 2,433 thousand euros (previous year: 1,485 thousand euros). In addition, due to statutory provisions, contributions to the state pension insurance company amounting to 2,322 thousand euros were charged to domestic companies. (previous year: 2,929 thousand euros).

The calculation of pension reserves was carried out based on the following underlying assumptions:

| (in %)                    | Germany |      | Italy |      | Taiwan |      |
|---------------------------|---------|------|-------|------|--------|------|
|                           | 2017    | 2016 | 2017  | 2016 | 2017   | 2016 |
| Discount rate             | 1.74    | 1.98 | 1.30  | 1.31 | 1.60   | 1.80 |
| Salary and wage increases | 2.50    | 2.50 | 2.63  | 2.63 | 3.00   | 2.00 |
| Pension increases         | 1.70    | 1.70 | 1.50  | 1.50 | 3.00   | 2.00 |

An increase or decline in key actuarial assumptions would have the following effect on the present value of pension obligations:

| (in EUR tsd.)                    |         | 2017 |
|----------------------------------|---------|------|
| Discount rate sensitivity        | +0.50%  | -657 |
| Discount rate sensitivity        | -0.50%  | 728  |
| Sensitivity for pension dynamics | +0.50%  | 385  |
| Sensitivity for pension dynamics | -0.50%  | -439 |
| Sensitivity for life expectancy  | +1 year | 345  |

The weighted average duration of performance-based obligations was 14.0 years at the end of the reporting year (2016: 12.2 years).

## OTHER NON-CURRENT PROVISIONS (25)

Changes in other non-current provisions in the reporting year were as follows:

| (in EUR tsd.) | Jan. 1,<br>2017 | Changes in<br>the scope<br>of consoli-<br>dation | Currency<br>adjust-<br>ments | Utilization   | Liquidation | Discount<br>rate | Addition     | Dec. 31,<br>2017 |
|---------------|-----------------|--|------------------------------|---------------|-------------|------------------|--------------|------------------|
| Warranties    | 2,205           | -200   | -46                          | -1,300        | -429        | -7               | 2,039        | 2,262            |
| Personnel     | 663             | -85  | 0                            | -442          | -33         | 0                | 350          | 453              |
|               | <b>2,867</b>    | <b>-285</b>                                      | <b>-46</b>                   | <b>-1,742</b> | <b>-462</b> | <b>-7</b>        | <b>2,389</b> | <b>2,715</b>     |

Long-term personnel obligations contain obligations from partial early retirement as well as anniversary obligations. The provision for partial retirement was supplemented by the covering assets of 245 thousand euros, net (previous year: 21 thousand euros).

Provisions for warranty obligations are recognized on the basis of past experience. It is expected that the costs will be incurred within the next two fiscal years.

## OTHER NON-CURRENT LIABILITIES (26)

Other non-current liabilities in the amount of 241 thousand euros (previous year: 325 thousand euros) relate to the long-term portion of the earn-out component from the acquisition of KLEO Halbleitertechnik GmbH in fiscal year 2015.

## CURRENT FINANCIAL LIABILITIES (27)

Short-term financial liabilities relate to various short-term lines of credit and overdrafts for financing operating activities; they are due within a period of one year. Standard market interest rates have been agreed upon for short-term loans. Furthermore, this also contains the short-term component (repayment in the following year) of the long-term financial liabilities.

## TRADE PAYABLES (28)

Trade payables are accounted for at amortized cost. Their balance sheet values generally correspond to their market values. They are due within one year.

## OTHER CURRENT PROVISIONS (29)

Other current provisions changed as follows:

| (in TEUR) | Jan. 1, 2017 | Change in the scope of consolidation | Currency adjustment | Utilization   | Liquidation | Addition     | Dec. 31, 2017 |
|-----------|--------------|--------------------------------------|---------------------|---------------|-------------|--------------|---------------|
| Personnel | 1,688        | -22                                  | -50                 | -1,415        | -201        | 1,203        | 1,203         |
| Reworking | 525          | 0                                    | 0                   | -524          | -1          | 194          | 194           |
| Other     | 5,081        | -224                                 | -35                 | -4,699        | -123        | 3,783        | 3,783         |
|           | <b>7,294</b> | <b>-246</b>                          | <b>-85</b>          | <b>-6,638</b> | <b>-325</b> | <b>5,180</b> | <b>5,180</b>  |

The Other contains reserves for potential losses from customer orders, commissions, and year-end costs.

The provisions usually lead to payments being made in the following year.



# TO DAY RE SOURCE ESTOMOR ROW

The conscious, responsible use of resources is not an abstract idea for Manz. Neither is it limited to declarations of intent that lie in the future. Conserving and saving resources is a process for

us in the here and now. The goals are clear: less waste, fewer emissions, and reduction of energy consumption.









# Waste prevention

## Less is more

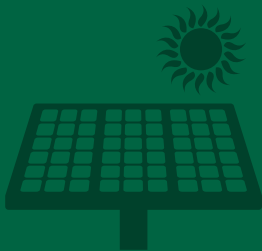
Waste prevention is a challenging goal because of its high dependence on business development. Nonetheless, over the past three years we have managed to limit the increase in waste to less than 30 % with 46% sales growth.

## Ensure better air

In the same period, we reduced consumption by around 40 percent across all sources of energy (electricity, gas, heating oil, district heating, and fuels) and lowered CO<sub>2</sub> emissions, which Manz AG can offset directly or indirectly, by around 30 %.



# Emissions



## The sun plays a role

We are particularly proud of the photovoltaic plants at our sites in Reutlingen, Germany, and Suzhou, China. The two photovoltaic plants in Reutlingen produce over 340,000 kWh of electricity per year. In addition, the photovoltaic plant on the roof of our location in China last year covered 1,504,000 kWh, a substantial part of our own electricity needs.

# 1,504,000 kWh

**OTHER CURRENT LIABILITIES (30)**

| (in EUR tsd.)                 | Dec. 31, 2017 | Dec. 31, 2016 |
|-------------------------------|---------------|---------------|
| Tax liabilities               | 808           | 887           |
| Personnel-related liabilities | 7,386         | 5,775         |
| Earn-out liabilities          | 3,181         | 3,115         |
| Other                         | 1,819         | 4,578         |
|                               | <b>13,194</b> | <b>14,355</b> |

The tax liabilities are, among other things, from payroll and church tax liabilities. The earn-out obligations include 3,000 thousand euros for the earn-out component from the purchase of CIS Technology GmbH in 2012, which is unlimited and depends on the sale of CIGS equipment, and also 181 thousand euros (previous year 115 thousand euros) for the short-term portion of the earn-out component from the purchase of KLEO Halbleitertechnik GmbH in fiscal year 2015. All liabilities are due within one year.

## REPORTING ON FINANCIAL INSTRUMENTS

The following table shows the reconciliation of balance sheet items to the categories of financial instruments, divided according to the carrying amounts and fair values of the financial instruments.

Trade receivables, other current receivables, liquid funds, trade payables, and the lion's share of other liabilities as set out in IFRS 7 mostly have short remaining terms. The carrying amounts of these financial instruments are therefore assumed to equate approximately to their fair market values.

### Assets as of December 31, 2017

| Carrying Amounts by Measurement Category |                |                       |                                     |                                |  |                               |
|--|----------------|-----------------------|-------------------------------------|--------------------------------|--|-------------------------------|
| (in EUR tsd.)                            | Fair value     | Loans and receivables | Financial assets available for sale | Designated hedging instruments | Not in the application area IFRS 7, IAS 39 | Carrying amount Dec. 31, 2017 |
| Other non-current assets                 | 540            | 540                   | –                                   | –                              | –  | 540                           |
| Financial investments                    | 23,575         | –                     | 23,575                              | –                              | –  | 23,575                        |
| Trade receivables                        | 95,709         | 47,191                | –                                   | –                              | 48,518                                     | 95,709                        |
| Derivative financial instruments         | 29             | –                     | –                                   | 29                             | –  | 29                            |
| Other current receivables                | 12,270         | 6,613                 | –                                   | –                              | 5,657                                      | 12,270                        |
| Cash and cash equivalents                | 72,209         | 72,209                | –                                   | –                              | –  | 72,209                        |
|  | <b>204,332</b> | <b>126,553</b>        | <b>23,575</b>                       | <b>29</b>                      | <b>54,175</b>                              | <b>204,332</b>                |

### Liabilities as of December 31, 2017

| Carrying Amounts by Measurement Category |                |                                      |                          |                                     |                                |  |                               |
|--|----------------|--------------------------------------|--------------------------|-------------------------------------|--------------------------------|--|-------------------------------|
| (in EUR tsd.)                            | Fair value     | At fair value through profit or loss | Valued at amortized cost | Carrying amount according to IAS 17 | Designated hedging instruments | Not in the application area IFRS 7, IAS 39 | Carrying amount Dec. 31, 2017 |
| Financial liabilities                    | 40,305         | –                                    | –                        | –                                   | –                              | –  | 40,305                        |
| Financial liabilities from leases        | –              | –                                    | –                        | –                                   | –                              | –  | –                             |
| Trade payables                           | 117,509        | –                                    | –                        | –                                   | –                              | –  | 117,509                       |
| Derivative financial instruments         | 7              | –                                    | –                        | –                                   | 7                              | –  | 7                             |
| Other liabilities                        | 13,442         | 3,422                                | 1,826                    | –                                   | –                              | 8,194                                      | 13,442                        |
|  | <b>171,263</b> | <b>3,422</b>                         | <b>1,826</b>             | <b>–</b>                            | <b>7</b>                       | <b>8,194</b>                               | <b>171,263</b>                |

**Assets as of December 31, 2016****Carrying Amounts by Measurement Category**

| (in EUR tsd.)            | Fair value     | Loans and receivables | Financial assets available for sale | Not in the application area IFRS 7, IAS 39 | Carrying amount Dec. 31, 2016 |
|--------------------------|----------------|-----------------------|-------------------------------------|--|-------------------------------|
| Other non-current assets | 723            | 723                   | –                                   | –  | 723                           |
| Trade receivables        | 77,726         | 44,396                | –                                   | 33,330                                     | 77,726                        |
| Sonstige Forderungen     | 7,651          | 3,668                 | –                                   | 3,983                                      | 7,651                         |
| Liquid funds             | 55,722         | 55,722                | –                                   | –  | 55,722                        |
|                          | <b>141,822</b> | <b>104,509</b>        | <b>–</b>                            | <b>37,313</b>                              | <b>141,822</b>                |

**Liabilities as of December 31, 2016****Carrying Amounts by Measurement Category**

| (in EUR tsd.)                     | Fair value     | At fair value through profit or loss | Valued at amortized cost | Carrying amount according to IAS 17 | Designated hedging instruments | Not in the application area IFRS 7, IAS 39 | Carrying amount Dec. 31, 2016 |
|-----------------------------------|----------------|--------------------------------------|--------------------------|-------------------------------------|--------------------------------|--|-------------------------------|
| Financial liabilities             | 54,415         |                                      | 54,415                   | –                                   | –                              | –  | 54,415                        |
| Financial liabilities from leases | 12             |                                      | –                        | 11                                  | –                              | –  | 11                            |
| Trade payables                    | 47,228         |                                      | 47,228                   | –                                   | –                              | –  | 47,228                        |
| Derivative financial instruments  | 158            |                                      | –                        | –                                   | 158                            | –  | 158                           |
| Other current liabilities         | 14,355         | 0                                    | 10,353                   | –                                   | –                              | 4,002                                      | 14,355                        |
|                                   | <b>116,168</b> | <b>0</b>                             | <b>111,996</b>           | <b>11</b>                           | <b>158</b>                     | <b>4,002</b>                               | <b>116,167</b>                |

## MEASUREMENT CLASSES

The Group uses the following hierarchy to determine and present the fair market values of financial instruments for each measurement method:

Level 1: (unadjusted) prices for identical assets or liabilities quoted on active markets.

Level 2: input data that is observable either directly (i.e., as prices) or indirectly (i.e., derived from prices) for the asset or liability and that does not represent any quoted price as described in Level 1.

Level 3: input data that is not based on observable market data for the measurement of the asset or liability (unobservable input data).

The financial assets and liabilities recognized by Manz at fair market value break down as follows in the fair market value hierarchy levels:

## ASSIGNED TO FAIR MARKET VALUE HIERARCHY LEVELS

| (in EUR tsd.)   | Dec. 31, 2017 | Fair value hierarchy |         |         |
|---|---------------|----------------------|---------|---------|
|   |               | Level 1              | Level 2 | Level 3 |
| <b>Assets at fair value – affecting net income</b>          |               |                      |         |         |
| Derivatives with on-balance-sheet hedging relationship      | 29            | –                    | 29      | –       |
| <b>Assets at fair value – not affecting net income</b>      |               |                      |         |         |
| Financial investments                                       | 23,575        | –                    | –       | 23,575  |
| <b>Liabilities at fair value – affecting net income</b>     |               |                      |         |         |
| Conditional purchase price liabilities                      | 3,422         | –                    | –       | 3,422   |
| <b>Liabilities at fair value – not affecting net income</b> |               |                      |         |         |
| Derivatives with on-balance-sheet hedging relationship      | 7             | –                    | 7       | –       |

| (in EUR tsd.)   | Dec. 31, 2016 | Fair value hierarchy |         |         |
|---|---------------|----------------------|---------|---------|
|   |               | Level 1              | Level 2 | Level 3 |
| <b>Assets at fair value – affecting net income</b>          |               |                      |         |         |
| Derivatives with on-balance-sheet hedging relationship      | –             | –                    | –       | –       |
| <b>Assets at fair value – not affecting net income</b>      |               |                      |         |         |
| Financial investments                                       | –             | –                    | –       | –       |
| <b>Liabilities at fair value – affecting net income</b>     |               |                      |         |         |
| Conditional purchase price liabilities                      | 3,440         | –                    | –       | 3,440   |
| Derivatives with on-balance-sheet hedging relationship      | 158           | –                    | 158     | –       |
| <b>Liabilities at fair value – not affecting net income</b> |               |                      |         |         |
| Derivatives with on-balance-sheet hedging relationship      | –             | –                    | –       | –       |

The measurement of the fair market value of the financial instruments in levels 1, 2, and 3 held as of December 31, 2017, resulted in the following total income and expenses:

| (in EUR tsd.)                    | 2017 | 2016  |
|----------------------------------|------|-------|
| <b>Assets</b>                    |      |       |
| included in the income statement | 29   | –     |
| recorded in equity               | –670 | –     |
| <b>Liabilities</b>               |      |       |
| included in the income statement | –26  | –158  |
| recorded in equity               | 1    | 2,763 |

### FINANCIAL ASSETS OF THE FAIR MARKET VALUE HIERARCHY LEVEL 3

| Development              | 2017   | 2016 |
|--------------------------|--------|------|
| <b>As of January 1</b>   | 0      | 0    |
| Additions                | 24,245 | 0    |
| Disposals                | 0      | 0    |
| Change in fair value     | –670   | 0    |
| <b>As of December 31</b> | 23,575 | 0    |

### FINANCIAL LIABILITIES OF THE FAIR MARKET VALUE HIERARCHY LEVEL 3

| Development              | 2017  | 2016  |
|--------------------------|-------|-------|
| <b>As of January 1</b>   | 3,440 | 4,000 |
| Additions                | 0     | 0     |
| Disposals                | 0     | 0     |
| Change in fair value     | –18   | –560  |
| <b>As of December 31</b> | 3,422 | 3,440 |

The calculation of the fair value of the contingent purchase price installment from the acquisition of Kleo Halbleitertechnik GmbH classified in level 3 of the measurement hierarchy is based on contractual agreements or internal planning data.

Would have the underlying parameters (revenues) been 10% higher (lower) in the current period, the value of the contingent liability would have been 24 thousand EUR higher (lower).



## NET EARNINGS BY MEASUREMENT CATEGORIES SET OUT IN IAS 39

| (in EUR tsd.)  | Net gains/<br>losses | Total interest<br>income/<br>expenses |
|--|----------------------|---------------------------------------|
| <b>Fiscal Year 2017</b>                                    |                      |                                       |
| Loans and receivables                                      | -834                 | 96                                    |
| Assets held for trading (derivate financial instruments)   | 0                    | 0                                     |
| Available-for-sale financial assets                        | -474                 | 0                                     |
| Financial liabilities at fair value through profit or loss | 18                   | 0                                     |
| Financial liabilities measures at amortized cost           | -266                 | -1,754                                |
|  | <b>-1,556</b>        | <b>-1,658</b>                         |
| <b>Fiscal Year 2016</b>                                    |                      |                                       |
| Loans and receivables                                      | -370                 | 48                                    |
| Assets held for trading (derivate financial instruments)   | -143                 | 0                                     |
| Available-for-sale financial assets                        | 2,125                | 0                                     |
| Financial liabilities at fair value through profit or loss | 0                    | 0                                     |
| Financial liabilities measures at amortized cost           | -921                 | -3,496                                |
|  | <b>691</b>           | <b>-3,448</b>                         |

The net gains and losses from loans and receivables primarily include gains and losses from currency translation and changes to valuation allowances on receivables and receivable losses from construction contracts.

Interest income for financial instruments in the "Loans and receivables" category is the result of investing liquid funds. The interest result in the category "Financial liabilities measured at cost" relates to interest expenses from financial liabilities due to banks.

## FINANCIAL RISK MANAGEMENT AND FINANCIAL DERIVATIVES

As a company which operates internationally, the Manz Group is exposed to credit, liquidity, and market risks during the course of its ordinary business activities. Market risks particularly result from changes to exchange rates and interest rates. Financial risk management measures are designed to manage and limit these market risks within the scope of operating and financial activities. Depending on the risk assessment, derivate hedging instruments are used. To reduce the default risk, hedging transactions are entered into only with leading financial institutions which have excellent credit ratings.

The basic principles of Manz financial policy are regularly determined by the Executive Board and monitored by the Supervisory Board.

The sensitivity analyses in the following sections refer to the situation on December 31, 2017, and 2016, respectively. The sensitivity analyses were carried out based on the hedging relationships which existed on December 31, 2017, and on the premise that net debt, the relationship between the fixed and variable interest rates of liabilities and derivatives, and the share of financial instruments held in foreign currencies will remain constant.

The sensitivity analyses were prepared based on the following assumptions:

- The sensitivity of the relevant items on the income statement reflects the effect of assumed changes in the corresponding market risks. This is based on financial assets and financial liabilities held on December 31, 2017, and 2016, including the effect of the hedging relationship.

## CREDIT RISKS

Credit risk is the risk that business partners will not be able to meet their contractual obligations and that the Manz Group will therefore incur a financial loss. Within the scope of its operating activities, the Group is particularly exposed to default risks when it comes to trade receivables and risks within its financing activities, including cash investments with banks and derivative financial instruments.

The credit risk from receivables from customers is managed (locally) at the company level and constantly monitored. In project business, the risk of default is minimized by advance payments. If default risks are noticeable in the case of financial assets, these risks are recognized by means of valuation allowances. The default risk associated with cash investments and derivative financial instruments is reduced by spreading the investments across different banks.

The maximum credit risk of financial assets (including derivatives with a positive market value) corresponds to the carrying amount recognized in the balance sheet. As of the balance sheet date December 31, 2017, the company's maximum credit risk totaled 204,332 thousand euros (previous year: 141,822 thousand euros).

| (in EUR tsd.)                                | 2017          | 2016          |
|--|---------------|---------------|
| <b>Not overdue and not impaired</b>          | 41,270        | 27,713        |
| <b>Overdue and not individually impaired</b> |               |               |
| Overdue and not impaired (1–30 days)         | 949           | 2,529         |
| Overdue and not impaired (31–60 days)        | 877           | 3,806         |
| Overdue and not impaired (61–90 days)        | 97            | 25            |
| Overdue and not impaired (91–180 days)       | 478           | 554           |
| Overdue and not impaired (>180 days)         | 340           | 27            |
| Individually impaired net receivables        | 3,180         | 9,742         |
| <b>Trade accounts receivable</b>             | <b>47,191</b> | <b>44,396</b> |

Non-impaired trade receivables showed no indications of requiring recognition of impairment. The recoverability of receivables neither overdue nor impaired is regarded as very high. This assessment is due, above all, to the long-standing business relationship with most buyers and the credit rating of our customers.

Other non-current assets and other current receivables are neither overdue nor impaired.

## LIQUIDITY RISKS

Liquidity risks, meaning the risk that Manz cannot meet its financial obligations, could be limited by the creation of financial reserves and the use of appropriate financial instruments to manage future liquidity situations.

At the balance sheet date, there are non-utilized credit lines at banks in the amount of 20,657 thousand euros (previous year: 20,680 thousand euros). The existing guarantee credit lines with banks and credit insurers were fully utilized.

The following lists show the contractually agreed, non-discounted interest and principal payments for the primary financial liabilities as set out in IFRS 7. If the maturity date is not fixed, the liability is applied to the earliest maturity date. Interest payments with variable interest yield are taken into account according to the terms applicable as of the reporting date. We mainly assume that the cash outflows will not occur earlier than shown.

| (in EUR tsd.)                    | Total          | 2018           | 2019         | > 2019       |
|----------------------------------|----------------|----------------|--------------|--------------|
| <b>Dec. 31, 2017</b>             |                |                |              |              |
| Financial liabilities            | 43,345         | 37,733         | 4,092        | 1,520        |
| Finance lease                    | 0              | 0              |              |              |
| Trade payables                   | 117,509        | 117,509        |              |              |
| Derivative financial instruments | 7              | 7              |              |              |
| Other current liabilities        | 9,229          | 9,229          |              |              |
|                                  | <b>170,090</b> | <b>164,478</b> | <b>4,092</b> | <b>1,520</b> |

| (in EUR tsd.)                    | Total          | 2017           | 2018       | > 2018     |
|----------------------------------|----------------|----------------|------------|------------|
| <b>Dec. 31, 2016</b>             |                |                |            |            |
| Financial liabilities            | 57,353         | 55,532         | 891        | 930        |
| Finance lease                    | 11             | 11             |            |            |
| Trade payables                   | 47,228         | 47,228         |            |            |
| Derivative financial instruments | 158            | 158            |            |            |
| Other current liabilities        | 10,689         | 10,689         |            |            |
|                                  | <b>115,439</b> | <b>113,618</b> | <b>891</b> | <b>930</b> |

The factory buildings and inventory belonging to Manz Slovakia s.r.o. have been provided as collateral for the loans and lines of credit extended to the Manz Group by banks and utilized as of the balance sheet date.

## CURRENCY RISKS

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in exchange rates. Above all, the Manz Group is exposed to this risk due to its business activities (if sales revenues and / or expenses are denominated in a currency other than the functional currency of the respective Manz company). In order to reduce the effects of exchange rate fluctuations, Manz AG continually quantifies exchange rate risks and hedges all major risks with forward exchange contracts and foreign exchange swaps whenever this is possible for economic reasons. The hedging of value fluctuations of future cash flows from expected transactions involves planned sales in foreign currency. Differences caused by exchange rates when financial statements are translated into the Group currency are disregarded.

To present market risks, IFRS 7 demands sensitivity analyses which show possible effects that changes to relevant risk variables (e.g. exchange rates, interest rates) might have on earnings and equity. To determine the periodic effects, a possible change in the risk variables on the financial instruments held by the company on the reporting date is under-

taken. It is assumed that the instruments held at the end of the year are representative for the fiscal year. Foreign currency derivatives are always assigned to hedged items so that no currency risks can arise from these instruments.

For the Chinese renminbi as the major foreign currency for the Manz Group, the following currency scenario results:

If the EUR had appreciated by 10% against the CNY as of December 31, 2017 (2016), consolidated net income would have been 822 thousand euros lower (previous year: 304 thousand euros higher). If the EUR had appreciated by 10% against the CNY as of December 31, 2017 (2016), consolidated net income would have been 1,004 thousand euros higher (previous year: 248 thousand euros lower).

## **INTEREST RATE RISKS**

Interest rate risk is the risk that the fair value or future cash flow of a financial instrument will fluctuate, due to changes in market interest rates. The risk of fluctuations in market interest rates to which the Group is exposed results primarily from loans with variable interest rates.

Manz has floating-rate loans that were subject to interest rate changes as of 31 December 2017. A hypothetical increase in these interest rates by 25 basis points per year would have caused an increase in interest expenses of 105 thousand EUR (previous year: 136 thousand EUR). A hypothetical reduction of 25 basis points per year would have caused a reduction of interest expenses by EUR 105 thousand (previous year: EUR 136 thousand).

## CONTINGENCIES AND OTHER FINANCIAL OBLIGATIONS

As of the balance sheet date, Manz AG had guarantees in place for liabilities to banks for third parties totaling 700 thousand euros (value on December 31, 2017: 156 thousand euros). In addition, there are liabilities for future license payments of NICE Solar Energy GmbH (formerly Manz CIGS Technology GmbH) in the amount of 8,050 thousand euros.

The Manz Group has entered into various rental agreements for buildings and leases for operating and office equipment as well as cars. The due dates of minimum lease payments from operating leases and rental agreements are as follows:

| (in EUR tsd.)                       | 2017   | 2016   |
|-------------------------------------|--------|--------|
| <b>Minimum lease payments</b>       |        |        |
| Remaining term up to 1 year         | 4,350  | 4,644  |
| Remaining term of 1–5 years         | 13,495 | 14,387 |
| Remaining term of more than 5 years | 13,756 | 16,360 |

In fiscal year 2017, rental and leasing payments of 5,013 thousand euros (previous year: 6,816 thousand euros) were recognized in other operating expenses.

## RELATIONS WITH RELATED COMPANIES AND RELATED PARTIES

IAS 24 requires disclosures of relationships, transactions and outstanding balances (including obligations) with related parties.

Accordingly, the Executive Board and the Supervisory Board of Manz AG, including their family members, have been identified as related parties. It also includes companies that are controlled by a related party or are under the joint control of a related company or related party. This circle includes the 2H.IM Executive Interim Management GmbH, Langweid. In the fiscal year 2017, services amounting to 144 thousand euros were purchased from 2H.IM Executive Interim Management GmbH, Langweid.

### COMPENSATION PAID TO THE EXECUTIVE BOARD AND SUPERVISORY BOARD

The basic principles of the compensation system and the level of payments to Executive Board and Supervisory Board members, as well as to former members of the Executive Board, are shown in the compensation report, which is part of the management report.

Total compensation of 2,121 thousand euros was paid to the Executive Board in the 2017 fiscal year (previous year: 1,852 thousand euros). The non-performance-based components totaled 1,205 thousand euros (previous year: 1,349 thousand euros) and the performance-related benefits are 0 euros (previous year: 100 thousand euros). The long-term payable components totaled 438 thousand euros (previous year: 403 thousand euros). Long-term benefits due refer to stock awards/subscription rights under the performance share plan. In the fiscal year, 4,544 (previous year: 15,336) subscription rights were granted to members of the Executive Board, with a corresponding fair value of 436 thousand euros (previous year: 192 thousand euros), as well as a performance share bonus with a fair value of 2 thousand euros.

The pension obligation for former CEO Dieter Manz was reduced in the year under review by the cash value of 478 thousand euros by transferring the reinsurance policy in the amount of 143 thousand euros and compensatory payment of 345 thousand euros.

Executive Board member Martin Drasch has a defined contribution plan. For this purpose, 12 thousand euros (previous year: 12 thousand euros) annually is paid into an external, reinsured pension fund.

Executive Board member Gunnar Voss von Dahlen has a contribution-based benefit obligation. For this purpose, 7 thousand euros (previous year: 0 euros) were paid into an externally reinsured provident fund.

Former Executive Board member Otto Angerhofer received a pension payment in the 2017 fiscal year of 10 thousand euros (previous year: 10 thousand euros). There is a pension obligation to the former member of the Executive Board in the amount of 167 thousand euros (previous year: 170 thousand euros).

Former Executive Board member Martin Hipp has a defined contribution plan. For this purpose, 7 thousand euros (previous year: 12 thousand euros) annually is paid into an external, reinsured pension fund.

## SUPERVISORY BOARD

Prof. Dr. Heiko Aurenz, Dipl. oec., Partner at Ebner Stolz Management Consultants GmbH, Stuttgart, Chairman of the Supervisory Board.

Prof. Dr.-Eng. Michael Powalla, Director of the Photovoltaics Business segment and a member of the Executive Board of the Center for Solar Energy and Hydrogen Research in Baden-Württemberg (ZSW), and professor of thin-film photovoltaics at the Karlsruhe Institute of Technology (KIT), Institute of Light Technology, Faculty of Electrical Engineering and Information Technology, Deputy Chairman of the Supervisory Board.

Dieter Manz, Dipl.-Eng. (FH), Managing Director of Manz GmbH Management Consulting and Investment, Schlaitdorf (from August 17, 2017).

Dr. Zhiming Xu, Chief Technical Officer of Shanghai Electric Automation Group of Shanghai Electric Group Company Ltd, Shanghai, PRC, and Managing Director of Shanghai Electric Germany Holding GmbH, Frankfurt, Member of Board of Suzhou Manz New Energy Equipment Co., Ltd., Suzhou PRC (from October 17, 2017).

Guoxing Yang, Shanghai, deputy director of the business development department at the Shanghai Electric Group Co. Ltd. Shanghai, PRC (until September 12, 2017).

The chairman of the Supervisory Board, Prof. Dr. Heiko Aurenz, is also the Chairman of the Supervisory Board of Know How! Aktiengesellschaft für Weiterbildung, Leinfelden-Echterdingen; Member of the Supervisory Board of Anna-Haag-Mehrgenerationenhaus e.V., Stuttgart; Member of the Supervisory Board of Anna Haag Stiftung gGmbH, Stuttgart; Member of the Supervisory Board of TanDiEM gGmbH, Stuttgart, Chairman of the Advisory Board of Monument Vermögensverwaltung GmbH, Stuttgart; Chairman of the advisory board of Andreas Lupold Hydrotechnik GmbH, Vöhringen, and member of the foundation board of the Aufbruch und Chance Stiftung, Stuttgart.

Deputy Chairman of the Supervisory Board Prof. Dr.-Eng. Michael Powalla, does not hold any other positions on mandatory supervisory boards or comparable supervisory boards of domestic or international companies.



Supervisory Board member Dieter Manz is a member of the Supervisory Board for Techn-vest Holding AG, Puchheim.

Supervisory Board member Dr. Zhiming Xu is a member of the Supervisory Board of NICE PV Research Ltd., Beijing (PRC) and member of the Advisory Board of Broetje-Automation GmbH, Rastede.

Former member of the Supervisory Board Guoxing Yang does not exercise any mandates in other statutory Boards of Directors or comparable domestic and foreign supervisory bodies of commercial enterprises.

## SUPERVISORY BOARD COMPENSATION

The compensation system for the Supervisory Board is also presented in the compensation report, which is part of the management report.

For the 2017 fiscal year, compensation was paid to members of the Supervisory Board totaling 57 thousand euros (previous year: 54 thousand euros). The compensation paid for the Supervisory Board consists in the reporting year as well as in the previous year exclusively of a fixed component.

## AUDITOR'S FEE

The fees assessed for services by the company responsible for auditing the financial reports, the BEST AUDIT GmbH auditing firm, are calculated as follows:

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| (in EUR tsd.)                            | 2017 | 2016 |
|--|------|------|
| Auditing the annual financial statements | 138  | 183  |
| less previous year                       | 6    | 20   |
| Other auditing services                  | 10   | 84   |
| Tax consultation services*               | 15   | 25   |
| Other services*                          | 21   | 29   |

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\* These services are provided by the auditing and tax advisory firm of alltax gmbh (network partner).  
Of the other services, 13 thousand euros (previous year: 8 thousand euros) are attributed to BEST AUDIT GmbH.

## CORPORATE GOVERNANCE CODE

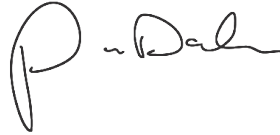
Manz AG's Executive Board and Supervisory Board have both issued a compliance statement pursuant to section 161 of the German Stock Corporation Act, and both statements are available to shareholders and can be viewed at any time by visiting Manz AG's website, [www.manz.com](http://www.manz.com).

Reutlingen, March 16, 2018

The Executive Board of Manz AG



Eckhard Hörner-Marass



Gunnar Voss von Dahlen



Martin Drasch

## ASSURANCE OF LEGAL REPRESENTATIVES

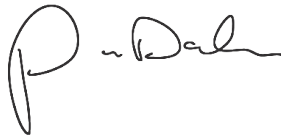
To the best of our knowledge, and in accordance with the applicable accounting principles, the consolidated financial statements give a true and fair view of the Manz Group's financial position, financial performance, and cash flows, and the Manz Group's management report includes a true and fair view of the trends and performance of the business and the position of the Group, as well as a description of the principal opportunities and risks associated with the Group's expected development.

Reutlingen, March 16, 2018

The Executive Board of Manz AG



Eckhard Hörner-Marass



Gunnar Voss von Dahlen



Martin Drasch

## AUDIT NOTES OF THE INDEPENDENT AUDITOR

### To Manz AG, Reutlingen

#### Notes on the audit of the group financial statement and the group management report

##### Audit opinions

We conducted an audit on the group financial statement of Manz AG, Reutlingen, and its subsidiaries (the group), comprising the group's profit and loss statement and the group's overall earnings statement for the fiscal year between January 1 and December 31, 2017, the group balance sheet as of December 31, 2017, the group's cash flow statement, and the group's equity capital alteration statement for the fiscal year ending on this sample date, as well as the group explanatory notes including a summary of the key accounting methods. Furthermore, we also audited the group management report of Manz AG, Reutlingen, for the fiscal year between January 1, to December 31, 2017. In line with the German statutory provisions, we did not audit the content of the components of the group management report specified in the section of our audit notes titled "Miscellaneous information".

According to our assessment based on the findings acquired through the audit,

- the attached group financial statement is, in all material respects, in accordance with the IFRS, as it is to be applied in the EU, and the supplementary German statutory provisions pursuant to Section 315e, Para. 1 of the German Commercial Code (HGB) and it conveys a depiction of the group's asset and financial situation as of December 31, 2017 that corresponds to reality in consideration of these provisions as well as its earnings situation for the fiscal year between January 1 and December 31, 2017.
- The attached group management report conveys an accurate depiction of the group's situation. In all material respects, this group management report is consistent with the group financial statement, it accords to German statutory provisions and it accurately presents the opportunities and risks of the group's future development. Our audit opinion of the group management report does not include the content of the components specified in section "Miscellaneous information" of the group management report.

Pursuant to Sec. 322, Para 3, Clause 1 of the (HGB), we declare that our audit did not result in any objections to the orderliness of the group financial report nor to the group management report.

##### Basis for the audit opinions

We conducted our audit of the group financial statement and the group management report in accordance with Section 317 of the HGB and EU regulation No. 537/2014 on specific

requirements regarding statutory audits (hereinafter referred to as "EU-APrVO") in consideration of the German guidelines for proper auditing of financial statements by the German Institute of Public Auditors (IDW). Our responsibilities in accordance with these provisions and guidelines are described in further detail in the section titled "Responsibility of the financial statement auditor for auditing the group financial report and the group management report" of these audit notes. We operate independently of the group companies in accordance with European and German commercial law as well as the relevant professional requirements and we have satisfied all of our other German professional obligations in line with these requirements. Furthermore, pursuant to Article 10, Para. 2, Letter f) of the EU-APrVO, we declare that we have not provided any prohibited non-auditing services pursuant to Article 5, Para. 1 of the EU-APrVO. We are of the opinion that the audit evidence requested from us is sufficient and appropriate for serving as the basis of our audit opinions of the group financial statement and of the group management report.

### **Especially important auditing circumstances in the audit of the group financial statement**

Especially important auditing circumstances are such circumstances that we deemed to be the most significant during our audit of the group financial statements for the fiscal year between January 1 and December 31, 2017 according to our professional judgment. These circumstances were considered in whole and in the creation of our audit opinion in connection with our audit of the group financial statement; we do not provide any separate audit opinion as to these circumstances.

In the following, we present the especially important auditing circumstances in our view:

#### **Recoverability of the business or company assets**

##### **Justifications for determination as especially important auditing circumstances**

In the group financial statement as of December 31, 2017, the business or company assets in the amount of 33 million euros (9% of the group balance sum) are identified under balance sheet item "Intangible assets".

The business or company assets are subject to an recoverability test once per fiscal year, or as required, in order to determine a possible need for depreciation. The result of this evaluation is to a large extent dependent on how the legal representatives assess future cash flows and how they deduce the applied discount rates. Against this background and due to the underlying complexity of the evaluation models, this circumstance was deemed to be of particular significance in the scope of our audit.

#### **Auditing approach**

During our audit, we retraced the methodological procedure for conducting the recoverability test and we assessed the determination of the weighed capital costs. Based on

the recording and critical assessment of the underlying planning processes, among other aspects, we were convinced of the appropriateness of the applied future cash flows during the assessment. We retraced the central assumptions of corporate planning for business performance and growth by discussing these in detail with the legal representatives. With the knowledge that even slight alterations to the applied discounting approaches could significantly impact the level of the determined company assets, we also assessed the parameters used in determining the discounting approach.

We used sensitivity analyses to estimate the risk of impairment loss given changes to the central evaluation assumptions. Moreover, we retraced the accounting accuracy of the evaluation models.

Based on our auditing activities, we did not arrive at any objections in regard to the assessment of the business or company assets.

#### **Notice of the corresponding information**

For the applied balancing and evaluation methods, we refer to the group explanatory notes "Accounting and evaluation principles" as well as "Management estimates and assessments". Further information about the business or company assets can be found in the group explanatory notes under Clause 14 "Business or company assets and trademark rights".

#### **Accounting for production orders**

##### **Justifications for determination as especially important auditing circumstances**

In the group financial statement as of December 31, 2017, an amount of 96 million euros (26% of the group balance sum) is identified under balance sheet item "Accounts receivable trade". This includes "Future accounts receivable and production orders" in the amount of 49 million euros.

A significant share of the company's business operations was conducted by way of production orders. The realization of revenue for long-term contract manufacturing is set out in the group financial statement in accordance with the percentage of completion method (PoC method). From our point of view, the accounting of production orders is one area with a relevant risk of material misstatements and, as such, constitutes a significant auditing circumstance as the estimates of the legal representatives have a significant effect when determining the stage of completion. This primarily applies in regard to total order costs, costs incurred until order completion, total contract revenue and contract risks.

Due to the named estimate uncertainties, there is a risk that revenue and earnings from the production orders will be incorrectly assigned to the fiscal years and that impending losses will not be recognized in a timely manner.

### **Auditing approach**

During our audit, we addressed the methods, procedures and project management controls for production orders determined by the company in house. Additionally, we assessed the design and effectiveness of the accounting-related internal controls by retracing contract-specific business transactions from their creation up to their presentation in the group financial statement.

Working on the basis of select risk-oriented samples, we assessed the estimates and assumptions made by the legal representatives using case-by-case examinations. In so doing, we specifically selected projects that exhibited significant future insecurities and risks, such as the large-scale CIGS contract with a total contract value of 263 million euros. Our auditing activities included a review of the contractual bases and contractual conditions. For the selected projects, we addressed the yield determinations appropriate to the period on the basis of the stage of completion and also investigated the financial accounting of the associated balance sheet items. Furthermore, we conducted interviews with technical and commercial project management about the development of projects, the reasons for deviations between the planned and the actual costs, the current assessment of the anticipated remaining costs until project completion, and the estimates made by the legal representatives in regard to the probability of the occurrence of order risks. Additionally, we assessed the PoC status reports of the suppliers and their appropriate inclusion in the project calculation for the large-scale CIGS order.

Based on our auditing activities, we did not arrive at any objections in view of the realization of revenue from the production orders.

### **Notice of the corresponding information**

For the applied balancing and evaluation methods, we refer to the group explanatory notes "Accounting and evaluation principles" as well as "Management estimates and assessments". Further information about the production orders can be found in the group explanatory notes under Clause 18 "Accounts receivable trade". For order-specific provisions for impending losses, we refer to Clause 30 "Other short-term liabilities" in the group's group explanatory notes.

### **Miscellaneous information**

The legal representatives are responsible for miscellaneous information. The miscellaneous information encompasses:

- the declarations about corporate governance pursuant to Section 289f and Section 315d of the HGB in the group management report.

- the assurances of the legal representatives as to the group's financial statement and as to the group management report pursuant to Section 297, Para. 2, Clause 4 of the HGB and Section 315, Para. 1, Clause 5 of the HGB and
- the remaining parts of the annual report, with the exception of the audited group financial statement and the group management report as well as our audit notes.

Our audit opinions on the group's financial statement and the group management report do not encompass miscellaneous information and, as such, we do not provide an audit opinion nor any other form of audit conclusion for this.

In connection with our audit, we bear responsibility for reading the miscellaneous information and acknowledging whether the miscellaneous information

- contains any significant discrepancies in relation to the group financial statement, to the group management report or to the results we arrived at through the audit, or
- if it seems to be erroneously represented in any other way.

In the event that, based on the work conducted by us, we arrive at the conclusion that a material misstatement of this miscellaneous information is present, we are obligated to report about this circumstance. In the present case, we do not have anything to report.

In accordance with the order, we conducted a separate business audit of the separate non-financial report. In regard to the type, scope and results of this business audit, we refer to our audit notes from 16 March 2018.

#### **Responsibility of the legal representatives and the supervisory board in relation to the group financial statement and group management report**

The legal representatives are responsible for creating the group financial statement, which corresponds to the IFRS, as it is to be applied in the EU, and the supplementary German statutory provisions to be applied pursuant to Section 315e, Para. 1 of the HGB in all material respects, and they are responsible for ensuring that the group financial statement conveys a depiction of the group's asset, financial and earnings situation that corresponds to reality in consideration of these provisions. Furthermore, the legal representatives are responsible for the internal controls that they have deemed necessary in order to allow for the creation of a group financial statement that is free of significant, intended or unintended, misstatements.

Upon creating the group financial statement, the legal representatives are responsible for assessing the group's capacity to carry on its business activities. Additionally, they bear responsibility for providing information as to the circumstances connected with the continuation of business activities, where relevant. Moreover, they are responsible for accounting on the basis of the accounting principles for the continuation of business activities, unless



there exists an intention of liquidating the group or ceasing business operations or if there is no realistic alternative for doing so.

The legal representatives are also responsible for compiling the group management report, which is to convey an overall accurate depiction of the group's situation and be in accord with the group financial statement in regard to all material respects and which must correspond to all German legal provisions and accurately portray the opportunities and risks of future developments. Furthermore, the legal representatives are responsible for all precautions and measures (systems) that they deem necessary in order to facilitate the creation of a group management report in line with the applicable German legal provisions and in order to be able to provide sufficient suitable evidence to support the statements made in the group management report.

The supervisory board is responsible for monitoring the group's accounting process in regard to the creation the group financial statement and the group management report.

### **Responsibility of the auditor for auditing the group financial statement and the group management report**

Our objective is to obtain a reasonable degree of assurance as to whether the group financial statement as a whole is free of any significant, intended or unintended, misstatements and whether the group management report generally provides an accurate depiction of the group's situation, is consistent with the group financial statement as well as with the findings from our audit in regard to all material respects, and whether they are in line with the German legal provisions and accurately portray the opportunities and risks of future developments. Our aim is also to issue audit notes that contain our audit opinions on the group financial statement and the group management report.

Reasonable assurance entails a high degree of assurance but does not constitute a guarantee that a performed audit will unfailingly uncover a misstatement in line with Section 317 of the HGB and the EU-APrVO and in consideration of the German guidelines for proper auditing of financial statements set by the German Institute of Public Auditors (IDW). Misstatements can result from violations or inaccuracies and are deemed to be significant when it can reasonably be expected that they individually or generally have an influence on the economic decisions made by addressees on the basis of this group financial statement and group management report.

During this audit, we practice professional judgment and maintain a critical basic approach. Additionally,

- we identify and assess the risks related to significant, intended or unintended, misstatements in the group financial statement and the group management report, we plan and carry out auditing activities in response to these risks and we acquire auditing evidence that is sufficient and suitable for supporting our audit opinions. The risk that material

misstatements are not uncovered is greater in the case of violations than in the case of inaccuracies since violations may entail fraudulent collaboration, falsifications, intended omissions, misleading statements or the derogation of internal controls.

- we acquire an understanding of the control system that is relevant for the audit of the group financial statement as well as the precautions and measures relevant for auditing the group management report in order to plan auditing activities that prove necessary under the given circumstances, not, however, with the aim of providing an audit opinion on the effectiveness of this system of the company.
- we assess the appropriateness of the accounting methods employed by the legal representatives as well as the viability of the estimated values and, as such, the associated information depicted by the legal representatives.
- we draw conclusions as to the viability of the accounting principles for continuing the business activities employed by the legal representatives and, on the basis of the acquired audit evidence, as to whether any significant uncertainty exists in connection with the events or circumstances, which could cast significant doubt relating to the group's ability to carry on its business activities. In the event that we arrive at the conclusion that significant uncertainty exists, we are obligated to draw attention to the associated information found in the group financial statement and in the group management report on the audit notes or, in case this information is deemed unreasonable, to modify our respective audit opinion. We draw our conclusions on the basis of the audit evidence obtained up to the date of our audit notes. Future occurrences or circumstances could, however, result in the group no longer being able to continue its business activities.
- we assess the overall depiction, the design and the content of the group financial statement, along with the information, as well as whether the group financial statement depicts the underlying business transactions and occurrences in such a way that it conveys an accurate portrayal of the group's asset, financial and profit situation that reflects the real conditions in consideration of the IFRS, as it is to be applied in the EU, and the supplementary German provisions pursuant to Section 315e, Para. 1 of the HGB.
- we collect sufficient, suitable audit evidence for the accounting information of the company or the business activities within the group in order to provide audit opinions on the group financial statement and on the group management report. We are responsible for guiding, monitoring and conducting the audit of the group financial statement. We bear sole responsibility for our audit opinions.
- we assess the extent to which the group management report is consistent with group financial statement, its legal equivalent and the depiction it provides of the group's situation.

- we conduct audit activities that address the future-oriented information in the group management report as depicted by the legal representatives. On the basis of sufficiently reasonable audit evidence, we retrace the central assumptions based on the future-oriented information furnished by the legal representatives, in particular, and assess the proper deduction of the future-oriented information from these assumptions. We do not provide an independent audit opinion on the future-oriented information as well as on the assumptions. A significant and unavoidable risk exists that future occurrences will notably differ from the future-oriented information.

Working with the individuals responsible for monitoring, we identify, among other things, the planned scope and the audit schedule as well as the core findings from the audit, including any deficiencies in the internal controlling system that we determine during our audit.

We provide the individuals responsible for monitoring with a declaration that we have complied with all relevant independence requirements and we work with them to identify all relationships and miscellaneous circumstances for which we can reasonably assume that they have impacted our independent work, along with the preventive measures that were agreed to.

Based on the circumstances that we identify in cooperation with the individuals responsible for monitoring, we determine which of them prove to be most significant in the audit of the group financial statement for the current reporting period and, as such, which audit circumstances were of particular importance. We outline these circumstances in the audit notes, unless laws or other legal requirements prohibit public disclosure of the circumstance.

### **Miscellaneous legal and other statutory requirements**

#### **Other information pursuant to Article 10 of EU-APrVO**

We were selected as financial statement auditors at the general meeting of shareholders on July 4, 2017. We were commissioned by the supervisory board on December 12, 2017. We have served as the group financial statement auditors for Manz AG uninterrupted since fiscal year 2008.

We declare that the audit opinions contained in these audit notes are consistent with the additional report for the audit committee pursuant to Article 11 of EU-APrVO (audit report).

**Responsible financial statement auditor**

The financial statement auditor responsible for the audit is Harald Aigner.

Reutlingen, March 16, 2018

BEST AUDIT GmbH  
Wirtschaftsprüfungsgesellschaft  
Zweigniederlassung Reutlingen

Marion Moser  
Wirtschaftsprüferin

Harald Aigner  
Wirtschaftsprüfer

## IMPRINT

### **Publisher**

Manz AG  
Steigaeckerstraße 5  
72768 Reutlingen  
Tel.: +49 (0) 7121 9000-0  
Fax: +49 (0) 7121 9000-99  
info@manz.com  
www.manz.com

### **Editor**

cometis AG  
Unter den Eichen 7/Gebäude D  
65195 Wiesbaden  
Tel.: +49 (0) 611 20 585 5-0  
Fax: +49 (0) 611 20 585 5-66  
www.cometis.de

### **Design**

Art Crash Werbeagentur GmbH  
Weberstraße 9  
76133 Karlsruhe  
Tel.: +49 (0) 721 94009-0  
Fax: +49 (0) 721 94009-99  
info@artcrash.com  
www.artcrash.com

**MANZ AG**

Steigäckerstraße 5  
72768 Reutlingen  
Tel.: +49 (0) 7121 9000-0  
Fax: +49 (0) 7121 9000-99  
[info@manz.com](mailto:info@manz.com)  
[www.manz.com](http://www.manz.com)