MESSER
Gases for Life

Annual Report

of Yeti GermanCo 1 GmbH 2021

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Group Management Report of Yeti GermanCo 1 GmbH

General Information on the Group

Overview of the Messer Industries Group

Yeti GermanCo 1 GmbH (the "company") is a holding company based in Sulzbach (Taunus) near Frankfurt/Main with a business address in Bad Soden am Taunus. It operates as a holding company and, together with its subsidiaries, associates and joint ventures, forms the Messer Industries Group (the "Group").

Yeti GermanCo 1 GmbH was founded as a joint venture company by Messer SE & Co. KGaA (until July 30, 2021: Messer Group GmbH; "Messer Group") and CVC Capital Partners, with the purpose of assuming the management of the businesses in the Americas ("Messer Americas") acquired from Linde and Praxair as of March 1, 2019 and the businesses in Western Europe ("Messer Western Europe") contributed by Messer SE & Co. KGaA. In this context Messer SE & Co. KGaA contributed its Western European operating activities in Spain, Portugal, Switzerland, France, Belgium, the Netherlands, Denmark, Germany and the company in Algeria, plus a right-of-use asset for the ‚Messer – Gases for Life' brand, to the joint venture for a period of ten years as of March 1, 2019. Yeti GermanCo 1 GmbH thus has its own subsidiaries in Western Europe, North and South America.

Founded in 1898, Messer is today the world's largest family-operated specialist for industrial, medical and specialty gases. Products and services are offered in Europe, Asia and the Americas under the ‚Messer – Gases for Life' brand.

From acetylene to xenon, the Messer Industries Group offers a wide-ranging industrial and medical gas product portfolio – the company produces and markets industrial gases such as oxygen, nitrogen, argon, carbon dioxide, hydrogen, helium, welding shielding gases, specialty gases, medical gases and many different gas mixtures.

Changes in group reporting in fiscal 2021

The following company was added to the consolidated group in the past fiscal year:

Company foundation

HyDN GmbH, with registered office in Jülich, is a joint venture of Messer Industriegase GmbH and the three additional partners, Beteiligungsgesellschaft Kreis Düren mbH, RWE Generation SE and Siemens Project Ventures GmbH, each with an interest of 25 %. The purpose of the joint venture is a common hydrogen project in the area of mobility.
The company was founded on the basis of a notarial certificate dated December 1, 2021 and subsequent approval from RWE Generation SE on December 15, 2021. The share capital was paid on December 22, 2021 and registration in the commercial register took place on January 17, 2022. For this reason, as of the end of the reporting period, the company is recognized as "in foundation".

Financial performance indicators

The Messer Industries Group uses control parameters derived from operating performance indicators to manage its business. The most significant performance indicators are revenue, EBITDA, capital expenditure and net debt. Further explanations and a breakdown of indicators can be found in the sections on financial performance and financial position.

Non-financial performance indicators*

Safety, health, environmental protection and quality (SHEQ) have been firmly embedded in the family-operated Messer's guiding principles since its inception in 1898, and continue to be its top priority today – especially in the context of the ongoing COVID-19 pandemic. Messer is aware that well-organized safety and quality guidelines form the basis for handling operational risks safely and for improving operational performance. For this reason, the health and safety of our employees and environmental protection are an integral part of global quality management, which is reflected in various standards of the Messer Industries Group, which were regularly revised against the backdrop of the COVID-19 pandemic to help effectively counter it.

The following information on non-financial performance indicators relates to the Group as a whole.

* The content of this section is voluntary and unaudited, but has been read critically by the auditor.

Occupational safety

Occupational safety is of great importance to the Messer Industries Group. Messer's safety guidelines reflect our position: "All work-related illnesses, injuries and accidents are avoidable."

Messer uses its management system to identify and control possible operational risks. The principles of this system are documented in a SHEQ manual and cover all relevant safety-related areas, such as risk management, safety training, safety tests, personnel protective equipment, communication safety and accident investigation. The SHEQ manual is a part of compliance management at the Messer Industries Group and is updated and improved regularly.

In order to measure the success of the safety measures and initiatives, the following performance indicators are determined annually: work accidents with lost days and frequency of accidents (number of work-related accidents with lost days per million working hours) and accident severity rate (missing days per million working hours).

In 2021, 17 work accidents with lost days were reported in the Americas (previous year: 19) and 10 (previous year: 4) in Western Europe. The absenteeism rate of employees per million hours worked (accident frequency) was 1.5 (previous year: 1.7) in the Americas in 2021 and 7.0 (previous year: 2.9) in Western Europe, while the number of days lost (accident severity) was 29.5 (previous year: 27.8) per million hours in the Americas and 140.8 (previous year: 34.4) in Western Europe.

	2021 Americas / WEU	2020 Americas / WEU	2019 Americas / WEU
Working accidents with lost days	17/10	19/4	18/10
Accident rate*	1.5/7.0	1.7/2.9	1.6/7.1
Accident severity*	29.5/140.8	27.8/34.4	21.6/186.4

*per million hours worked

Messer Western Europe is an active member of the European Industrial Gas Association (EIGA) and the International Oxygen Manufacturers Association ("IOMA") and Messer North America of the Compressed Gas Association (CGA) and the American Chemistry Council (ACC). Our experts actively share experiences in order to learn from incidents in the industrial gas sector.

Transport safety

The transportation of gases and equipment by road and customer deliveries are activities that involve major risks in the gas industry. Messer therefore pays special attention to the area of transport safety.

Most of the drivers who work for Messer in Europe are employed by external transport companies. These companies are responsible for training the drivers in accordance with the ADR (European Agreement concerning the International Carriage of Dangerous Goods by Road).

In 2021, the number of avoidable accidents when transporting our cylinder gases was 65 in the Americas (previous year: 53) and three in Western Europe (previous year: four). For every million kilometers driven, this corresponds to a frequency rate of 4.3 in the Americas (previous year: 6.1) and 0.5 in Western Europe (previous year: 0.7). The number of avoidable accidents while transporting liquefied gases was 149 in the Americas (previous year: 152) and one in Western Europe (previous year: nine); the frequency rate per

million kilometers driven in 2021 was 1.6 in the Americas (previous year: 1.2) and 0.1 in Western Europe (previous year: 0.5). Unavoidable accidents are those caused by external influences beyond the control of the driver. All other accidents are considered avoidable.

Messer is endeavoring to further reduce the number of accidents with the help of suitable supplier management, information on defensive driving and load safety. Messer has also created its own modular driver training package. The main issues covered by the training are:

- Statutory regulations (European and national regulations for the transport of dangerous goods by road)
- Technical aspects (hazards arising from product, vehicle and tank technology, vehicle checks, safety technology)
- Accident avoidance
- Defensive, economic driving

In addition, all drivers receive a manual specifically for their work (bulk, bottle or service vehicles). This ensures that the drivers have all the key information about their work to hand at all times.

IT Security and Digitalization

At Messer Western Europe, the Group IT Security Officer is responsible for coordinating security measures, creating standards and cultivating the corresponding expertise for all the individual companies. IT security supports the sustainability of our digitization and the physical security of our information, in addition to helping to ensure that our key business processes can be carried out by safeguarding the necessary availability of our systems. IT security services are devised by the IT Security team and its international members. The duties of the Group Security Officer and the Group Digital Officer are performed by Messer SE & Co. KGaA for Messer Western Europe.

In an IT security campaign several phishing e-mails were sent to employees in Western Europe. The phishing campaign made it possible for us to train employees in a targeted fashion about the dangers resulting from cyber criminality using an awareness platform. We are thus reducing potential IT risks and improving the knowledge of our employees. In another preventive measure, employees were allocated an assessment. Examples of topics were e-mail security, social engineering and password rules. The aim is to draw use attention to risky and unreflective behavior and to build up knowledge on information security. On the basis of the individually evaluated result, and should a specific error rate be exceeded, each employee is allocated to training which has a total of eleven modules.

At Messer Americas, the assessment of the cyber security risk is embedded in the company's entire risk management program. This includes regular audits and checks on the part of third parties to assess the general cyber security situation and timely compliance with targets. Over the course of the whole year, the Messer Americas Executive Committee is informed by the Chief Information Officer on the current status of cyber security by means of regular updates. This allows target achievement to be monitored and approval of the necessary funding for additional tools and resources.
In the matter of information technology Messer Americas regularly implements controls to protect itself against cyber attacks and threats. These comprise end devices, servers, applications and cloud platforms which are regularly monitored by members of the infrastructure and security organization so as to ensure a quick reaction to attacks, weaknesses or emerging threats. Messer Americas has IT securities directives and processes aiming to secure appropriate control and management of infrastructure, access and data. In-

creasing awareness among staff and providing training are important aspects of the cyber security program at Messer Americas. This is achieved on the basis of a combination of training, communication and the use of online tools which deploy social engineering concepts to heighten employee awareness and potential vulnerability for threats and attacks.

In the period under review, work was started implementing the outsourcing agreement for the central infrastructure in Europe which was concluded in the previous year. The central applications previously operated in the Messer Information Services GmbH data center were transferred to a cloud center provided by Kyndryl Deutschland GmbH (previously IBM Deutschland GmbH) and since then have been supported in line with the relevant current globally established standards. Subsequently work started on implementing a standard SD-WAN administered centrally by a corresponding team of experts to link the Messer Western Europe locations to the Kyndryl data center. In this context, what previously were heterogeneous security infrastructures and administrations at the sites are being standardized at the outsourcing partner by a team of experts. Parallel to this, work was started on transferring all client PCs and mobile devices to a central administration to ensure standard modern software, including the relevant current versions of Microsoft Office 365 and the latest security updates. It is planned to conclude the transition in the first half of 2022.

Messer Americas is constantly investigating the strategic possibilities of digitization and developing a framework concept for information services to enable the companies to grow continuously. Essential aspects that are examined as part of this concept are business applications, technical infrastructure and Internet security. Within the entire technology landscape package applications such as SAP are promoted, cloud-based services are increasingly used and the efficiency in the areas of business processing, automation and data management is examined. Internet security is an integral part of risk management, while protecting sensitive data is the top priority. It is for this reason that Messer Americas employees receive ongoing training on a large range of security and data protection topics. Management is responsible for increasing efficiency within information services, providing technologies which support the business strategy, while at the same time ensuring excellent service.

Data protection

Messer is committed to compliance with the applicable data protection regulations. Corresponding structures are therefore created to guarantee a high level of data protection at Messer in the long term.

The Messer SE & Co. KGaA Group Privacy Officer ("GPO") is responsible for the coordination of the central data protection department in Western Europe and also oversees implementation of data protection by the national subsidiaries. The GPO also provides a number of templates and processes to ensure a uniform standard of data protection.

Using a list of questions and an audit report developed by the GPO, a basic audit to establish the fundamental data protection level in the respective company was implemented at three companies in 2021. In Western Europe, the relevant data protection audits are planned for three additional companies in 2022.

For Messer Americas the data protection regulations are treated in a supplement to the Messer Group Code of Conduct. In addition to this, Messer Americas has also created its own Data Protection Policy that can be accessed on the North American intranet of Messer Americas. Both the Senior Counsel and Regional Compliance Officer at Messer Americas and the Head of Human Resources for North America Business Operations are the contact persons for questions and is-sues relating to data protection. Furthermore,

across the whole of the United States members of the Messer Americas legal and compliance teams are available to answer questions and concerns relating to data protection. When needed, Messer Americas also utilizes external legal advice in compliance issues, especially in South America. The "Ethics and Code of Conduct" e-learning also contains a data protection module that must be completed by all employees of Messer Americas.

Environmental management

Environmental protection to the greatest possible extent is highly important to Messer. To live up to this, Messer uses its global management system for environmental protection. The internal environmental protection policies are documented in the Messer Industries Group's SHEQ Manual. The environmental management systems of the Western European and American subsidiaries are consistent with the international ISO 14001 standard, and those of the Western European companies also adhere to the recommendations of the European Industrial Gases Association (e.g. EIGA IGC Doc. 107 – Guidelines on Environmental Management Systems). In 2021, six of our subsidiaries in Western Europe had their environmental management systems externally certified. Messer Americas follows the American Chemistry Council's Responsible Care Program, under which 29 (previous year: 35) locations in the US are certified. As in the previous year, in Columbia both air separation units and the CO_2 production site and four of nine locations in Brazil were ISO 14001-certified.

The efficient use of energy is in Messer's own interests. Pursuing the main goal of reducing costs and conserving resources, energy management is an ongoing process that also helps to reduce our carbon emissions. Our energy management system, for example, is certified according to ISO 50001 at all Messer production sites in Germany and Spain.

At its production sites, Messer uses atmospheric air and electricity as the main raw materials for producing air gases such as nitrogen, oxygen and argon. Production by air separation units accounts for more than 75 % of total energy consumption. Emphasis is therefore placed on the on-going enhancement of energy efficiency. Messer SE & Co. KGaA has thus engaged a Global Energy Manager (GEO) specifically to improve the energy efficiency of air separation units. The GEO also performs this task for the Western European companies of the Messer Industries Group.

The continuous monitoring of unit performance means that deviations in energy consumption can be detected and potential for improvement identified. In cooperation with local managers, projects to improve energy efficiency are being initiated on an ongoing basis.

As against the previous year, the gas volume produced in Western Europe increased by 17 % and at Messer Americas by 2.8 %. Specific energy consumption, measured per cubic meter of gas sold declined year on year by 1.1 % in Western Europe and 0.8 % at Messer Americas.

With membership of the European Clean Energy Alliance and the H2BZ-Initiative e.V., Messer can contribute its comprehensive expertise in the field of industrial gases for the efficient and effective use of green hydrogen with partners throughout Europe.

Customer satisfaction / quality

Taking the opinions and satisfaction of our customers into account is self-evident for us as a responsible company, which is why we measure customer satisfaction in systematic surveys and integrate the results into our management processes. The analyses are repeated every two years at every European national company.

In Western Europe, customer satisfaction surveys were carried out in France and Spain (previous year: France, Switzerland and Spain). In total, 2,612 customers (previous year: 9,760) were asked to complete the survey, which yielded 391 responses (previous year: 1,032).
The results of the various surveys are summarized by region. On a scale from 1 for very dissatisfied to 10 for very satisfied, the overall performance of the Messer Industries Group in Western Europe was slightly worse year on year at between 8.4 and 9.0 (between 8.9 and 9.4). However, the results remain at a high level overall.

In the Americas, satisfaction surveys were performed in the US, Canada, Brazil, Columbia and Chile (previous year: US and Brazil).
16,026 questionnaires were sent out (previous year: 29,009) 3,138 (previous year: 3,037) of which were analyzed. Satisfaction of our customers for the Americas region was rated 8.7 (previous year: 5.6) and thus posted a considerable improvement.

Economic Report

General economic conditions

The various industrial gases offered by the Group and the associated services and technologies are used in almost all industrial sectors, not to mention food technology, medicine, research and science. Gross domestic product (GDP), as it applies to all sectors and to the economy at large, is therefore a relevant indicator for the performance of the Messer Group.

According to the International Monetary Fund (IMF)[1], driven particularly by eased restrictions relating to the COVID-19 measures in 2021, global GDP moved up by 5.9 %, the highest level of growth for 80 years, after a decline of 3.1 % in the previous year. However, there were great regional differences for GDP in 2021. While the advanced states grew by approximately 5.0 % in 2021 (previous year: -4.5 %), at 6.5 % the recovery was more rapid in emerging market and developing economies (previous year: -2.0 %). Within the advanced states, 2021 growth in the eurozone of 5.2 % (previous year: -6.3 %) came out slightly below that of the 5.6 % in the USA (previous year: -3.4 %). In comparative terms, the fastest growth was recorded in the emerging and developing economies, driven primarily by (8.1 %) and India (9.4 %), after China was the only important economy which grew in 2020 (by 2.3 %). In most countries the level at the end of 2019 had thus already been surpassed. However, this applies only to a limited extent for low-income countries with low vaccination rates and for contact-intensive industries.[2]

In Europe, after the slump in the previous year, the economy recovered more quickly than anticipated in 2021. Thus in the second quarter, as a result of the successive easing of COVID-19 restrictions, private consumption increased and the economy gained considerable ground into the fall. In the fourth quarter of 2021, the recovery process was muted as a result of disruptions to supply chains, a renewed increase of COVID-19 cases and further rises in energy and consumer prices. According to the IMF[1], GDP for the euro area in 2021 is expected to have moved up by 5.2 %, after the slump of 6.3 % in the previous year. In the connection, after the strong economic downturn in the previous year, the Western European economic area with France (up 6.7 %, previous year: -8.0 %), Spain (up 4.9 %; previous year: -10.8 %) and Italy (up 6.2 %, previous year: -8.9 %) grew much more strongly and more quickly than expected. After the 4.6 % decline in German GDP in the previous year, GDP growth of 2.7 % in 2021 was below the European average.

In the Eastern European countries, economic growth was driven primarily by private consumption. In 2021, these countries also experienced a considerable economic recovery. According to the Vienna Institute for International Economic Studies[3], GDP growth in the Eastern European countries was between 2.3 % and 11.4 % in 2021. In Poland, Romania and Hungary pre-pandemic GDP levels were achieved as early as the second quarter of 2021.[4]

[1] World Economic Outlook, Update January 2022
[2] OECD Economic Outlook – Volume 2021 Issue 2
[3] Vienna Institute for International Economic Studies – press release Winter Forecast January 2022
[4] Kiel Institute for the World Economy – World Economy Autumn 2021, September 2021

After the corona virus in China has been largely controlled in 2020 on the basis of strict measures, strong economic growth was recorded there in the first half of 2021. In the second half of the year, particularly in the fourth quarter, growth slowed, the result of regulatory restrictions, prevailing power outages in the country, problems in the property sector and new outbreaks of COVID-19. As a result, China is expected to realize GDP growth of 8.1 % for 2021 (previous year: 2.3 %).[5]

After a huge economic slump in 2020 due to the COVID-19 pandemic, GDP in the USA expanded considerably in 2021, driven by factors including an ongoing low level of interest rates, state financial support and broad-based coverage with vaccines (at the same time as in Europe), despite some continued supply chain disruption, higher inflation as a result of higher energy and consumer prices and a resurgence of COVID-19 cases towards the end of the year. According to the IMF[5], GDP for 2021 as a whole is expected to have grown by 5.6 % after the 3.4 % contraction in 2020.

For Brazil , the IMF[5] expects GDP to move up considerably, by 4.7 %, after the slump of 3.9 % in 2020. The anticipated expansion is expected to be driven primarily by consumption as a result of emergency payments to households, even though social transfers were considerably lower than in the previous year.[6] The investment growth was buoyed by benign credit conditions.

Business performance

Industrial gases business is defined by a pronounced and highly varied diversification across economic sectors, customer segments and national activities. Furthermore, industrial gases business is locally structured, which means that it is not directly dependent on global supply chains. The economic recovery which continued in 2021 with the easing of pandemic-related restrictions resulted in increasing demand for industrial gases in the markets relevant for us.

For the Messer Industries Group, fiscal 2021 was defined by an unexpectedly rapid recovery of business from the COVID-19 pandemic. In North America this became particularly evident with high demand for liquid gases and hardware. Furthermore, the pandemic-driven demand for medical gases remained at a high level. Due to the general economic recovery, business in Western Europe also developed in a positive fashion, driven by a demand upturn of industrial gases. However, the positive business trend was somewhat countermanded by the strong upturn of energy prices in Europe in the second half of the year. South American business activities remained strong over the entire year, with rising demand for both medical and industrial gases. Particularly the Brazilian economy continued to prove robust across most markets.

In line with the forecast (slight increase) the Messer Industries Group generated revenue growth of more than 7.8 % to K€ 2,118,710.

[5] World Economic Outlook, Update January 2022
[6] Global Economic Prospects, June 2021

Last year a slight increase of EBITDA was forecast. This target was even exceeded with an EBITDA of K€ 634,130 and an upturn of 17.2 %. This positive trend resulted chiefly from a special effect in the USA. On the basis of energy swaps, it excess energy was returned to the supplier at a very high market price. Other factors included the ongoing high demand volume and successful pricing.

While a slight decrease had been forecast, net debt of the Messer Industries Group was reduced by K€ 259,678 (11 %) thanks to high earnings in the fiscal year and reducing high levels of cash and cash equivalents.

As forecast, the Messer Industries Group capital expenditure (K€ 295,875) moved up strongly against the previous year, by 20.0 %. This was driven largely by capital expenditure for large projects in the North America and Western Europe regions.

Overall situation of the Messer Industries Group

Results of operations

In fiscal 2021, the Group generated global revenue of K€ 2,118,710 (previous year: K€ 1,965,492), which breaks down among the individual regions as follows:

Revenue	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020	Change in 2021
North America	1,431,168	1,353,366	5.7 %
Western Europe	391,530	353,677	10.7 %
South America	296,012	258,449	14.5 %
Total	**2,118,710**	**1,965,492**	**7.8 %**

Business activities in the various regions developed as follows:

North America

North America generated revenue of € 1,431 million. The positive year-on-year development was driven by high demand volume and advantageous prices for liquid gases, such as oxygen, nitrogen and argon, as well as increased hardware sales volume. The economic recovery in Canada and higher revenue in the industrial sector also made positive contributions.

Western Europe

Revenue of the Western European companies was up by € 38 million as against the previous year to € 392 million. In the last fiscal year, demand volume increased strongly, primarily as a result of the good economic conditions, resumption of production in Tarragona, Spain, and the operation of the new plant in Speyer, Germany. Another positive effect resulted from the successful pricing policy underpinned in the first half primarily by higher demand volume. This was a reaction to the unexpectedly sharp electricity price upturn in the second half of the year. The previous year was strongly shaped by temporary business closures in all Western European countries on account of the COVID-19 pandemic and a serious accident at a main pipeline customer in Tarragona, Spain, which resulted in a serious decline in demand.

South America

The South America division generated revenue of € 296 million (previous year: € 258 million), a significant share of which was generated by Brazil at € 181 million (previous year: € 150 million). Revenue remained defined by very strong demand for medical oxygen, combined with ongoing sales volume and price increases in most business segments. Another factor positively contributing to the revenue trend was the commissioning of the new CO_2 plant in Jandaia do Sul, Brazil.

The Group generated global EBITDA of K€ 634,130 in fiscal 2021 (previous year: K€ 541,040).

EBITDA	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Operating profit/EBIT	279,162	194,982
Depreciation of property, plant and equipment, amortization of intangible assets and impairment	354,837	346,058
Income from investments	131	–
EBITDA	**634,130**	**541,040**
Revenue	2,118,710	1,965,492
Margin:	**29.9 %**	**27.5 %**

The operating profit essentially includes costs of sale of K€ 1,073,993 (previous year: K€ 1,001,068), selling and distribution expenses of K€ 627,562 (previous year: K€ 588,614) and general and administrative expenses of K€ 171,960 (previous year: K€ 181,113).

The EBITDA of the North America region improved considerably to € 431 million (EBITDA margin: 30.1 %) after € 371 million in the previous year with an EBITDA margin of 27.4 %. This positive trend resulted chiefly from a special effect in the USA of K€ 26,917. This was the result of being able to return excess energy to the supplier at a very high market price on the basis of energy swaps and high demand volume.

Western Europe generated EBITDA of € 114 million (previous year: € 95 million), corresponding to an EBITDA margin of 29.2 % (previous year: 26.9 %). The increase resulted primarily from volume growth combined with higher prices. Higher energy costs were passed on to customers. In addition, transportation efficiency was improved by optimizing shipment rates. Higher administration expenses with higher costs for salaries and bonuses as well as sales commissions, higher write-downs on receivables and increased IT costs reduce EBITDA, but are in line with revenue growth. EBITDA in the previous year was negatively impacted by a provision for legal matters of € 5.4 million in connection with energy deliveries in Spain.

South America reported EBITDA of € 88 million (previous year: € 75 million) with an EBITDA margin of 29.9 % (previous year: 29.0 %) in fiscal 2021, which was largely thanks to a rise in sales volumes, but also to increased efficiency in the production process and improved cost management.

At K€ 64,245 (previous year: K€ 85,816), the net financial result is largely due to a negative net interest result. During the year € 20 million of the financial liabilities raised in 2019, essentially to finance the Linde/Praxair transaction, were repaid as planned and € 406 million repaid on an unscheduled basis. Capitalized transaction costs of K€ 17,825 (previous year: K€ 11,094) were amortized.

In the reporting year, there was a tax expense of K€ 52,806 (previous year: K€ 16,939), corresponding to a tax rate of 26.4 % (previous year: 24.4 %).

In total, consolidated net profit including non-controlling interests of K€ 147,378 (previous year: K€ 52,461) was generated in fiscal 2021. K€ 146,740 (previous year: K€ 51,737) of this relates to the shareholders of the company.

Financial position

Group Treasury is responsible for overall liquidity, interest rate and currency management. The most important objective for Group Treasury is to ensure that the Group has a minimum level of liquidity to guarantee solvency at all times. High levels of cash funds (K€ 274,917) improve our flexibility, security and independence. We can generate additional liquidity as necessary through various other unutilized credit facilities amounting to € 322 million (previous year: € 290 million).

Financing
The Messer Industries Group is financed by a credit agreement with a syndicate of banks headed by CITIBANK N.A., UK.
The loan agreement serves to partially finance the purchase price payment for the Linde AG and Praxair business acquired in North and South America in 2019 and to finance ongoing business operations.

The credit agreement contains three facilities:

- “Facility B-1” of USD 2,225 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries USA, Inc., USA. The loan will be repaid quarterly at 0.25 % of the original amount, starting on June 28, 2019. There were unscheduled redemptions amounting to USD 290 million on March 31, 2021, June 30, 2021 and September 30, 2021. The balance will be repaid in full on March 1, 2026. The margin is 2.5 % p. a. or 1.5 % p. a. depending on the underlying refinancing base of the banks. As of December 31, 2021, the outstanding amount was USD 1,874 million (USD 1,654 million) and the margin 2.5 % p. a.

- “Facility B-2” of € 540 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries GmbH. There were unscheduled redemptions amounting to EUR 150 million on March 31, 2021 and September 30, 2021. The remaining amount of the loan is due on March 1, 2026. The margin was initially 2.75 % p. a., until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2021, the outstanding amount was USD 390 million and the margin 2.5 % p.a.

- “Revolving facility” of USD 450 million: The borrowers are Messer Industries GmbH and Messer Industries USA, Inc., Delaware, and any other company that secures the loan agreement as a guarantor. The facility can be used to finance working capital and for all general financing requirements of the company on a revolving basis. There is no requirement to reduce the loan to zero at any time during its term. It is available until March 1, 2024. The margin was 1.75 % p. a. or 0.75 % p. a., depending on the underlying refinancing base of the banks, until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2021, the revolving facility was used only for guarantees. The margin here is 0.75 % p. a.

Guarantees provided by individual Group companies serve as collateral for the financing. Investments in Group companies, property, plant and equipment, bank balances, trade receivables and receivables from affiliated companies were also pledged.

Net debt amounts to K€ 1,822,521 (previous year: K€ 1,946,309) as of December 31, 2021 and is calculated as follows:

	Dec. 31, 2021	Dec. 31, 2020	Change in 2021
Financial liabilities	2,097,438	2,357,116	(11.0) %
Cash and cash equivalents	(274,917)	(410,807)	(33.1) %
Net debt	**1,822,521**	**1,946,309**	**(6.4) %**

The ratio of existing financial liabilities (K€ 2,097,438) to total assets (K€ 4,875,638) was 43.0 % (previous year: 50.6 %) and to EBITDA (K€ 634,130) 3.3:1 (previous year: 4.4:1).

The change in financial liabilities is shown below:

Financial liabilities as of Jan. 1, 2021	**2,357,116**
Cash changes:	
New debt raised	116
Payments of principal	(436,950)
Non-cash changes:	
Additions to lease liabilities	20,207
Changes due to currency translation	139,124
Amortization of transaction costs	17,825
Financial liabilities as of Dec. 31, 2021	**2,097,438**

Statement of cash flows

The statement of cash flows is as follows:

Condensed version in K€	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Profit before tax	200,184	69,400
Cash flow from operating activities	635,648	222,581
Cash flow from investing activities	(282,825)	(217,990)
Cash flow from financing activities	(498,431)	(133,795)
Changes in cash and cash equivalents	**(145,608)**	**(129,204)**
Cash and cash equivalents		
at the beginning of the period	**410,807**	**577,422**
Currency translation effect on cash and cash equivalents	9,718	(37,411)
at the end of the period	**274,917**	**410,807**

The cash flow from operating activities was K€ 635,648 and therefore K€ 413,067 higher than the previous year's level. In addition to significantly lower income tax payments of K€ 37,352 (previous year: K€ 283,160), this development is mainly due to the strong rise in profit before tax. The high income tax payments, which shaped cash flow in the previous year, were incurred in the US and result from the acquisition of Linde AG's business there as of March 1, 2019.

The development in cash flow from investing activities was defined largely by investments in property, plant and equipment and intangible assets of K€ 292,464 (previous year: K€ 240,746). This was offset chiefly by cash generated from the proceeds of disposals of property, plant and equipment and intangible assets (K€ 5,145, previous year: K€ 15,304) and interest received (K€ 4,259, previous year: K€ 7,316).

The cash flow used in financing activities amounted to K€ 498,431 (previous year: K€ 133,795). In the past fiscal year, financial liabilities were reduced by K€ 414,260, not only on the basis of regular installments, but also by unscheduled repayments (previous year: K€ 19,497). There were cash outflows of K€ 62,852 (previous year: K€ 91,185) for interest essentially related to financing.

The cash funds of the Messer Industries Group amount to K€ 274,917(previous year: K€ 410,807) as of December 31, 2021.

Operating business will grow, investments will be made and the maturing loans and interest will be repaid in fiscal 2022 as well. The funds required will be generated from cash flow from operating activities, available cash and unutilized credit facilities. Medium-term planning is still focused on the consolidation of net debt for our business activities in the US.

The Group has undertaken to invest in the acquisition, construction and maintenance of various production facilities. Obligations of this kind relate to the future purchase of plant and equipment at market prices. There are also long-term contracts giving rise to obligations. As of December 31, 2021, the commitments under orders, investment projects and long-term contracts amounted to K€ 584,685 (previous year: K€ 612,942).

Capital expenditure

Capital expenditure continues to focus on safeguarding existing business and exploiting profitable growth potential. In line with business principles, we therefore primarily invest in projects that safe-guard our product supply or that offer opportunities for profitable growth. Furthermore, there is regular investment in the modernization of production systems and distribution channels.

The capital expenditure of the Messer Industries Group as a whole is explained below.

In 2021, the Messer Industries Group invested around € 296 million (previous year: € 247 million) in intangible assets and property, plant and equipment. Expressed as a percentage of total revenue, capital expenditure amounts to 14.0 % (previous year: 12.6 %).

Capital expenditure breaks down by region as follows:

Capital expenditure in K€	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
North America	205,291	179,460
Western Europe	73,807	51,704
South America	16,777	15,479
Total	**295,875**	**246,643**

In North America, investment again focused on safeguarding existing business and projects dealing with on site plants and air separation units in the field of liquefied gases with opportunities for profitable growth. Investments in intangible assets and property, plant and equipment related primarily to projects amounting to € 122 million (previous year: € 101 million). These include the laser gas plant in Coolbaugh, Pennsylvania, USA (€ 29 million), new air separation units in Indianapolis, Indiana, USA (€ 14 million), in Delta, Ohio, USA (€ 12 million) and in Arroyo, West Virginia, USA (€ 5 million) as well as helium containers (€ 7 million). Furthermore, there was investment of € 83 million (previous year: € 78 million) in sales equipment and maintenance, in addition to capital expenditure to boost productivity.

Of the capital expenditure of € 73.8 million (previous year: € 51.7 million) in Western Europe, € 43.9 million relates to large-scale plant projects (previous year: € 23.1 million) and € 29.9 million to operating activities (previous year: € 28.6 million). The largest projects were the € 31.9 million new air separation unit Messer V and the pipeline renewal in Tarragona (Spain). There were also investments of € 6.9 million for the LACQII CO2 plant in France, of € 1.0 million for extending the filling unit in Siegen, Germany and of € 1.1 million for completing the air separation unit in Speyer, Deutschland. Investments in operating activities mainly relate to the investments in tanks to support the core business and maintain machinery.

In South America, as in the previous year, capital expenditure amounted to € 16.8 million (previous year: € 15.5 million) and related to operating activities and the maintenance of existing systems.

Net assets

Total assets increased by K€ 219,027 in the reporting year to K€ 4,875,638 as of December 31, 2021. The main contributing factors were the increase in non-current assets of K€ 153,927 and current financial assets of K€ 145,113. On the other hand, cash and cash equivalents declined by K€ 135,890.

At 79.6 %, non-current assets again account for the largest share of total assets (previous year: 79.9 %).

As before, the largest item on the assets side is capital assets (property, plant and equipment, right-of-use assets and intangible assets). At 78.4 %, this item is up by 4.2 % as against the previous year (78.8 %). This change mainly results from investing activities in the current fiscal year, depreciation and amortization and currency effects. Exchange rate changes resulted in an increase of K€ 198,074.

The equity ratio (including non-controlling interests) increased slightly to 29.6 % (previous year: 25.9 %).

Financial liabilities amount to K€ 2,097,438 in the fiscal year (previous year: K€ 2,357,116) and account for 43.0 % (previous year: 50.6 %) of total equity and liabilities. Please refer to our comments under "Financial position".

Operating assets

Net working capital breaks down as follows:

Operating assets in K€	Dec. 31, 2021	Dec. 31, 2020
Inventories	173,178	156,361
Trade receivables	283,289	256,792
Trade payables	(194,171)	(148,045)
Liabilities for outstanding invoices	(96,106)	(65,824)
Prepayments received	(22,187)	(16,203)
	144,003	**183,081**

The decrease in operating assets of K€ 39,078 is essentially due to the increase trade payables and liabilities for outstanding invoices of our companies in the US.

The ratio of inventories (less prepayments received) and trade receivables to trade payables (plus liabilities for outstanding invoices) is 1.5:1 (previous year: 1.9:1). The ratio of operating assets to revenue is 6.8 % (previous year: 9.3 %).

Days sales outstanding (DSO) slightly increased to 48 (previous year: 47).

Overall statement on the economic situation

The generally satisfactory overall business development exceeded expectations in place when acquiring the new business activities in 2019. The Messer Industries Group has an international presence with its three main regions of Western Europe, North America and South America, and it has good regional diversification in a large number of countries within these three core regions. Weak demand on individual markets or downturns in specific industries can therefore often be compensated.

Forecast Report

On February 24, 2022, the Russian army attacked Ukraine. A large number of countries reacted with major sanctions against Russia. Currently, further developments and the ramifications on global economic income can be assessed only with difficulty. This applies particularly to the energy sector. The available forecasts published by leading economic institutes do not yet factor in these current developments. However, it is probable that the Russian invasion of Ukraine will slow global growth, increase inflation and have a sustained geopolitical impact, particularly on Europe. The consequences of the war and the sanctions again Russia imposed in this connection will have a particular impact on raw materials and energy. Due to the unpredictable development and length of the military conflict in the Ukraine and the related high level of uncertainty, we cannot yet reliably assess the financial impact on business activities. For this reason, the following forward-looking statements take no account of possible repercussions of the Russian attack on the Ukraine.

General economic development

After the global economic recovery which started in 2021, driven primarily by the easing of COVID-19 measures, the outlook for economic growth in 2022 and 2023 is generally worse than in the previous year. At the beginning of the year, supply chains vulnerable to disruptions and further in-creasing energy prices fed into higher inflation. Nevertheless, the economic institutes[7,8] still hold the view that the economies in the advanced, emerging and developing countries will continue to grow in 2022. For example, the World Bank and also the International Monetary Fund (IMF) are forecasting global GDP growth for 2022 of 4.1 % to 4.4 % following a projected 5.6 % to 5.9 % in 2021. Alongside the COVID-19 risks, inflation expectations driven by higher energy and consumer prices, and supply bottlenecks, the fragile political situation and natural disasters as a consequence of climate changes are risks to the economy.

In the euro area and in particular in Eastern Europe, it is anticipated that the Ukrainian conflict will have a considerable negative impact on previously forecast GDP growth. For China, the expectation is that the growth path achieved in 2021 will be continued at a considerably reduced level. This is due to the resurgent regional COVID-19 outbreaks and ongoing consolidation of the property market. It is conjectured that there are great risks on the property market, driven particularly by the high level of borrowing. This could adversely impact house prices, consumption and financing capability on a sustained basis. For 2022, the World Bank[8] and the IMF[7] are forecasting moderated GDP growth of 4.8 %, after the 8.1 % achieved in 2021. For the USA, alongside the consequences of COVID-19 and higher consumer and energy prices, it is anticipated that disruptions in supply chains will successively be resolved and fiscal support gradually come to an end. Thus, the economic research institutes are indicating a GDP growth rate of up to 4 % in 2022 after a GDP upturn of 5.6 % in 2020. After weak economic data and poor investor sentiment, for Brazil very low year-on-year growth of 0.3 % is anticipated.

[7] World Economic Outlook, Update January 2022
[8] World Economic Prospect, January 2022

Outlook for the Messer Industries Group

The medium-term planning of the Messer Industries Group is still defined by efforts to boost profitability and to reduce net debt. Through suitable investment, we intend to further increase revenue in line with the general economic conditions and utilize selected measures to stabilize or increase the Messer Industries Group's profitability.

Based on the assumption of a complete recovery from the impact of the COVID-19 pandemic, the outlook for North America for fiscal 2022 is for revenue to rise by 3 % (previous year forecast: 1 %). This is determined primarily by higher sales volumes and sales prices. In addition, this 12 % EBITDA decline (previous year forecast: no change) is based on the reversal of unsustainable cost management activities and a special effect in the USA in 2021, which on the basis of energy swaps resulted in returning excess energy to the supplier at a very high market price.

In Western Europe – in the context of the discontinuation of COVID-19 pandemic restrictions and the assumption that our customers are not materially impacted by supply chain difficulties– revenue is expected to grow by 2 % (previous year forecast: 2 %) and EBITDA by 10 % (previous year forecast: 9 %) in the coming fiscal year. Our business activities in Europe continue to focus on economically optimized utilization of the new production capacity created in recent years, selected customer projects, targeted capacity expansion and mitigation of high energy costs on the back of reducing costs and optimizing business processes.

Assuming that industrial activities will continue to grow across all regions, revenue in South America is expected to rise by 5 % (previous year forecast: 7 %) with EBITDA expanding by 12 % (previous year forecast: 5 %). Also in South America, volume growth and prices increases are the key drivers for the positive trend. Local currencies are not expected to depreciate further.

We are anticipating considerable price increases in respect to the energy costs which are important for our industry, especially in Europe.

Future investment decisions are made in line with an appropriate development of net debt.

The developments of the most important financial performance indicators of the Messer Industries Group for the following year are planned as follows:

	2022 vs. 2021
Revenue	Moderate increase
EBITDA	Moderate decrease
Capital expenditure	Strong increase
Net debt	Strong decrease

Planning is based on the assumption that fiscal 2022 will no longer be shaped by the effects of the COVID-19 pandemic.
We expect that in 2022 growth momentum in North America will remain in place. In our overall forecast for Western Europe, we have assumed comparatively moderate economic growth. In South America, we are forecasting low market growth.

Forward-looking statements

The forecast contains forward-looking statements based on management's current appraisal of future developments. These statements should not be interpreted as a guarantee that these expectations will actually occur. The future business performance and earnings of the Messer Industries Group are dependent on a number of risks and uncertainties, and can therefore diverge significantly from the forward-looking statements made here.

In the 2022 planning shown, no account was taken of the anticipated negative effects of the Russian attack on the Ukraine because at the current point in time no reliable quantification can be made as to their extent.

Report on Opportunities

As an international supplier of industrial gases, opportunities arise for the Messer Industries Group from the versatile applications for industrial gases in the manufacture of products needed in all fields of life and every country of the world. Through our investments, we seize the corresponding opportunities to tap new business potential and to maintain and expand our market position.

Specifically, the following opportunities in particular could be significant to business development and to financial position and financial performance:

General economic opportunities

The overall economic environment generally influences our business activities, our financial position and financial performance and our cash flows. Our forecast for 2022 is based on the expectation that the future economic framework will be consistent with the information presented in the forecast section of this management report. If the global economy as a whole or in regions/countries relevant to our business develop better than shown in this forecast, our revenue and earnings could outperform the forecast.

Opportunities arising from industrial gas applications

Our products are used in a variety of production processes worldwide. In the field of application technology, the Messer Industries Group continuously analyzes various processes to enhance production efficiency for our customers through the use of industrial gases. New applications identified in this way could open up corresponding business potential with a positive impact on revenue and earnings.

Opportunities through our employees

The pandemic has resulted in a transformation of the working world. The importance of working from home has increased and it has established itself as a suitable form of work. The Messer Industries Group is developing concepts which allow not only hybrid but also shared working places. In this way, alongside the higher levels of flexibility, we want to increase employee loyalty and satisfaction. The Messer Industries Group promotes ideas and perspective management throughout the organization, allowing our employees to suggest improvements across all national borders. In addition, the active development and use of our employees' potential is supported by systematic personnel development programs and training. We believe that investing in the development of our employees promotes a good corporate culture throughout the company and can have a positive effect on revenue and earnings.

Opportunities arising from digitalization

To remain competitive digitalization and networking have to be advanced in the company. For this reason it is vital to improve employee knowledge on cyber and technology risks to create a strong digital corporate culture. With the realignment of our IT infrastructure to a multi-cloud environment with IBM and Microsoft as the driving technology partners, we have established the requisite conditions. We attach great importance to globally established standards in all country companies for operating our central IT systems and applications as well as protecting data and information which are provided via such systems. Our tools used to support our production, bulk and cylinder gases management are subject to continuous improvement and have a wide-ranging impact on the value-added chain of our company and that our customers. With the assistance of newly aligned digital processes with optimized plant management, electric energy is saved and tour planning improved. In the process we make a positive contribution to environmental protection, at the same time reducing our production and operating costs, something which can positively impact our profits.

Opportunities through sustainable action

Sustainability is complex and permeates all areas of our organization, from product development to HR issues, from digitalization to climate neutrality. To do justice to the requirements of our stakeholders, it must be reflected in our actions and attitudes. An expression of this stance is the first production facility for air gases in Texas, USA, which will be operated with energy from our own solar park. This is the first Messer air separation unit which covers its energy requirements from a nearby renewable energy source with the intention of reducing the carbon footprint. A further significant contribution to decarbonization is the use of green hydrogen which will be a key focus for our capital expenditure over the next few years.

Risk Report

As an international supplier of industrial gases, we face risks with that are inextricably linked to entrepreneurial activity. In addition to fluctuating demand for industrial gases and the related products, future earnings development is also dependent on economic trends in individual countries that are beyond the Messer Industries Group's control.

The following risks have been presented in gross terms, i. e. mitigating factors have not been taken into account.

Specifically, the following risks in particular could have a significant negative impact on business development and on financial position and financial performance:

General economic risks

The industrial gases business is competitive. The effect of globalization on the company can vary according to geographical location. Any change in the competitive environment could reduce Messer's future earnings and cash flows. The Messer Industries Group operates in a large number of countries, and it is therefore exposed to local political, social and economic conditions and the resulting risks. Due to the political and economic tensions in connection with the Ukraine conflict, we assess the general economic risk as medium.

Market and price risks

We deliver to a broad range of industries and sectors (including steel production and metal processing, the chemicals industry, petrochemicals industry, food and beverage industry, healthcare and glass industry) on the basis of long-term supply agreements running from between up to 15 years in Europe to up to 20 years in the Americas. A significant reduction in market demand in any one of these key industries or sectors could adversely affect future earnings. In addition, the highly competitive environment in individual countries could lead to disproportionate price trends that reduce our future revenue and earnings. Against the backdrop of the price increases related to the Russian invasion of Ukraine, there is a higher market risk, particularly in countries whose energy requirements depend on Russia, that companies with a high level of energy intensity can discontinue or sharply reduce production. We currently rate the market and price risks as high.

Health risks

We supply a wide range of industries that today run production operations virtually everywhere in the world. These global supply chains can be severely disrupted by epidemics of infectious dis-eases in major manufacturing countries or a pandemic. The COVID-19 pandemic, which has been ongoing since the spring of 2020, has not only had serious consequences for health, but also for the global economy and public life as a result of strict state restrictions and global curfews. In 2020 and 2021, the Messer Industries Group was also impacted by the pandemic. However, with its diversified overall portfolio and its corresponding ability to compensate weaker segments with more profitable ones it managed to avoid serious consequences. With vaccines becoming available in 2021, the global economic recovered after few restrictions and curfews.

However, the spread of new virus variants brings with it further uncertainty for 2022. We currently rate economic risks of disruption as medium to low.

Cost risks

Regulatory or governmental changes or intervention in the energy sector can lead to rising energy prices in individual countries. Rising energy requirements are causing considerable volatility in oil and energy prices with corresponding implications for the operating materials and precursors required by the Messer Industries Group.
As a result of the strong rise in prices for natural gas, the chief source for generating electrical energy in Europe, energy prices continued to climb in 2021. Demand for energy is rising across the globe, resulting in rising energy prices the world over.
Purchase prices for individual significant products can thus fluctuate considerably. In Western Europe and the USA, management is implementing measures to contain these commodity risks, including the electricity price risk arising from electricity purchases for operating activities. Management's objectives and strategies consist of hedging against these risks as far as possible and reasonable.
Although the Messer Industries Group can often pass cost electricity price increases on to its customers through price escalation clauses or mitigate them with long-term procurement contracts, price increases for energy and external procurement costs can reduce the profitability of the Messer Industries Group and pose an EBITDA risk of a low-eight-figure amount. We currently rate the cost risk as high, particularly in view of the sanctions currently imposed on Russia.

Product procurement risks

The ability of the Messer Industries Group to serve its clients with a broad range of products and services depends not only on its own production, but also on the products and services obtained from internal and external suppliers. The main objective is to supply clients in a reliable fashion and at appropriate quality at all times. Availability of sufficient qualities of products and services at appropriate prices is the key to achieve this target. Nevertheless, as a result of product shortages, particularly for helium, or the loss of individual suppliers there is the risk of supply difficulties or breakdowns. Furthermore, procuring substitutions can represent a cost risk if products and ser-vices be obtained only at higher prices. This can pose an EBITDA risk of a low-eight-figure amount.
The Messer Industries Group counters this risk on the basis of a broad supplier network and strict monitoring of product availability. In addition, it is always looking for additional supplier alternatives. We currently rate the product procurement risks as high, also due to the anticipated negative impact in various areas of the supply chains as a result of the Russian invasion of Ukraine.

Transportation risks

A further risk at the Messer Industries Group is supplying its clients with the required quantity and quality of products at the right time and the right place. To do this, Messer deploys internal and external distributors which transport its products to the clients, generally by truck. On the other hand, Messer is also dependent on the distributors of its suppliers to ensure that products are available in sufficient quantities at all times. When using truck transportation, there is the risk of product losses resulting not only from unsuitable

product storage but also inadequate transport safeguards or accidents. What is more, closure of relevant transportation routes can result in delays, and thus higher costs. In the USA in particular, the Messer Industries Group operates its own truck fleet and employs its own drivers. Here there is a shortage of skilled staff resulting in the risk of it not being possible to employ the necessary number of drivers to service demand. Furthermore, there is a cost risk that higher demand for specialist staff could result in higher wages. The Messer Industries Group counteracts this risk on the basis of a careful selection and a broad network of distributors. In addition, there is ongoing monitoring of the necessary and available resources. We currently rate transportation risks as medium.

Operational risks

A business interruption at our production facilities can lead to supply disruption for our customers. We endeavor to avoid this situation by regularly maintaining and monitoring our equipment. In the event of damage, we have emergency and contingency plans in addition to further tools to mitigate the financial consequences of a business interruption for our customers. The Messer Industries Group is working to improve delivery reliability and flexibility to safeguard delivery capability for our customers even in the event of an emergency. The range and quality of our services are dependent on the availability of purchased hardware and the production equipment used (e. g. cylinders and tanks), and on the service quality of suppliers and business partners. We currently rate operational risks as medium.

IT risks

The use of state-of-the-art information technology plays a key part in handling and securing business processes within the Messer Industries Group, but also has corresponding risks. The technical outage of central systems of entire locations could considerably disrupt processes within the Messer Industries Group and result in business interruptions. But interruptions as a result of successful phishing or cyber attacks could also jeopardize safeguarding business processes.

The security and compliance of the information systems are set out in the IT strategy objectives. On this basis, we are constantly designing, implementing and reviewing measures to protect data, applications, systems and networks. This process takes both preventive and corrective measures into account.

We use preventive vulnerability scans to check the externally accessible IT communication points of our European companies. The vulnerabilities identified are addressed according to their risk category and resolved with corresponding measures.

We use a checklist defined by the IT security team to perform self-audits of IT security, thereby mapping the current status, and recommend measures to avoid or reduce risks. The analysis focuses on questions about the IT systems and applications used, and also examines infrastructure or network areas. This instrument serves to raise awareness and avoid potential risks in IT operations. We currently rate IT risks as medium, but see ourselves exposed to a steadily increasing risk situation which will result in us having to take increasingly far-reaching measures to avert danger.

Financial risks

We require our available cash funds and credit facilities for our growth and investments. We are dependent on a stable and, in particular, liquid financial sector. The Messer Industries Group relies on cash from current business activities to settle the obligations under its borrowing operations, including compliance with covenants. This depends to a large extent on a positive operating cash flow.
The Group has recognized goodwill. Applying IAS 36, i. e. testing for impairment, can lead to impairment losses on goodwill if the market and business prospects of a subsidiary, associate or a cash-generating unit deteriorate significantly compared to their original measurement date. In the event of impairment becoming necessary, this could have a significant impact on earnings and accounting ratios.
Global economic collapse or downturns are a recurrent threat in conjunction with financial or debt crises. The Messer Industries Group will closely monitor current developments in order to take countermeasures, if necessary, in the form of cost and investment saving programs. The possible deterioration in the credit ratings of our customers entails the risk of bad debts and delays to joint projects.
In the Messer Industries Group, financial risks can also arise from changes in exchange rates and interest rates. The management of interest rate, currency and liquidity risks is handled by the Treasury department based on the guidelines set out by management. The Treasury department calculates and measures financial risks and hedges against them. The Messer Industries Group currently uses standard currency forwards, non-deliverable forwards, interest derivatives and electricity swaps as hedging instruments. The Treasury guidelines contain principles for general risk management and individual regulations for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash. The risks are monitored at all times and the extent of protection is adjusted if necessary. We currently rate the impact of relevant financial risks as low to medium.

Currency risks

As far as operating activities of the Messer Industries Group are concerned, the individual Group companies predominantly conduct their business locally in their functional currency. The overall currency risk from transaction risks is thus considered low overall.
However, a number of Group companies are exposed to foreign currency risks in connection with operational transactions not denominated in their own functional currency. This mainly relates to payments for product or service imports and are hedged as far as possible. Like all market participants, we could unexpectedly encounter appreciation in a functional currency that weakens the country's international competitive capability for exports and our local activities. We see currency risks from translating foreign currency exposures into euro as a standard part of doing business. Exchange rate losses against the euro could lead to lower consolidated net profit and consolidated equity. We rate currency risks as medium at this time.

Legal and contractual risks

Time and again, businesses are confronted with allegations that they have infringed industrial rights or legal obligations, delivered defective products or failed to comply with environmental protection laws. Regardless of their chances of success, such claims can result in very high defense costs. The Messer Industries Group relies on the support of both in-house and external experts to handle such matters.
In the Group, in connection to an accident in the USA a provision was established which is fully covered by existing and recognized insurance claims. In connection with investigations in Spain, the Group still has a provision of € 5 million. For further information on these investigations, please refer to note 31 “Contingent liabilities” in the notes to the consolidated financial statements.
In many countries our business activities are subject to specific environmental laws and regulations, for example on air emissions, groundwater pollution, the use and handling of dangerous substances and soil analysis and detoxification. This can give rise to liability risks in conjunction with either past or current operations. New environmental requirements in particular necessitate the occasional adjustment of our standards. This could result in higher production costs and modifications to the production process. However, the recent past shows that the integration of stricter environmental regulations results in a more efficient production process and higher quality product. We currently rate legal and contractual risks as medium.

Overall conclusion

The opportunities set out above show that there is both internal and external potential. We endeavor to actively develop in-house potential and will leverage external potential whenever the opportunity arises. These are not the only risks to which the Messer Industries Group is exposed. Some risks, which have not yet been identified or which are not considered significant today, could possibly have an adverse effect on the Messer Industries Group if the overall conditions were to change. However, no risks were identified in 2021 that, individually or in aggregate, could significantly influence the Messer Industries Group as a going concern. Management does not expect these risks to occur in 2022 either. The main operational risks in the reporting period are in the areas of market and price as well and costs and product procurement. We have put all organizational requirements in place to identify potential risks early on. Our vigilant, active risk management system, as described below, helps us to limit risk.

Risk Management

The principles of risk policy are defined by the Messer Group Management Board in the Messer Group Guidelines. Risk management is designed to ensure that the Group remains a going concern and to increase its enterprise value; it is therefore a key component of all decision-making and business processes. The management structure and the reporting processes in place ensure that not just the developments that could threaten the Group as a going concern, but also even developments that could pose a threat to short-term corporate targets (such as EBITDA), are reported to the appropriate persons promptly and regularly. This allows management to initiate measures to mitigate any operating or financial risks early on. Risk managers who safeguard the local reporting processes have been appointed at the individual subsidiaries. At the end of each fiscal year, the local risk managers report their risks to Group Controlling. There the risks are aggregated and combined into an annual risk report which is submitted to the Managing Director and the

Advisory Board. As far as possible the risks recorded in the risk report are quantified and classified on the basis of probability. In comparison to previous fiscal years, the current risk situation has increased considerably, due primarily to the strong global increase of energy prices.

Our Corporate Governance contains a large number of requirements and measures to prevent risks from occurring. The primary component of our risk management is a risk assessment. This is performed – and updated each year – by the central offices for the respective department and by each consolidated subsidiary for its own business.

We have arranged for adequate insurance for potential losses and liabilities which ensures that the possible financial consequences of risks that occur are either contained or eliminated entirely. The extent of this insurance cover is continuously optimized based on the specific requirements of the companies in each country.

State-of-the-art technologies are used in IT to minimize risks in this area. Unauthorized access to data and systems, as well as significant data losses, have therefore been ruled out as far as possible. The efficiency, availability and reliability of systems are constantly being monitored and improved. The security concept also comprises detailed contingency planning. All technologies used are regularly tested as to whether they ensure the security of IT-based business processes so as to minimize risks of all kinds.

Tax laws and competition regulations can also give rise to business risks. The company relies on the advice of both in-house and external experts.

Income and operating cash flow are essentially unaffected by market interest rates, as the Group does not hold any significant interest-bearing assets. Variable interest loans are partially hedged using interest rate derivatives (cash flow hedges for future interest payments). At the end of the reporting period, there are solely derivative financial instruments concluded with international financial institutes with investment grade ratings.

Compliance Management

With the Messer Compliance Management System ("Messer CMS"), we have implemented an organizational concept which describes our value system and defines its practical implementation and the related responsibilities. The aim of the organizational concept is to prevent infringements against the Messer Code of Conduct even before they arise. It represents a binding framework of action to deal with conflicts of interest as well as complying with applicable laws, regulatory regulations and the local and corporate operating rules in all our business areas. The Messer CMS is supported by a clear commitment of the executives and management and serves as an instrument to build trust with our customers, partners, employees and our competition, with the public and the media.

We have issued binding compliance guidelines for our companies. In particular, these include the Code of Conduct and the Group Guidelines. All managers at the first and second management levels have confirmed that they have received these regulations, acknowledged their content and are committed to complying with them. Furthermore, all employees have been informed of the CMS content relevant to them and have confirmed their compliance. Management and employees receive regular information and training on the content of these guidelines, other policies and rules of conduct.

The management of the company is responsible for monitoring the Messer CMS. This organizational concept is binding for all Messer executives, managers and employees. The executives are responsible for implementing this organizational concept in their own country companies and ensuring compliance of the same, taking into account local legal regulations. A Chief Compliance Officer has been appointed to support the executives and the supervisory bodies. In addition, there are country compliance officers appointed by the regional managers in coordination with the respective country executives. The group of compliance officers is supplemented by officers for the central areas in the Corporate Office as (specialist) department compliance officers. The tasks, rights and obligations of the compliance officers have been set down in a Compliance Officer directive.

On the basis of a detailed risk analysis, including all country companies and central departments, potential weaknesses within Messer were defined. Alongside classroom training, webinars and e-learning can be implemented on topics relating to the Messer Code of Conduct. The central specialist departments and the local executives and specialist departments determine the training contents and the staff who need training. They take on the design and implementation of training, when necessary supported by external service providers, and ensure proper documentation on the matter. The management can make binding requirements on training and training contents as well as determining the group of employees which should have this training.

Internal Audit checks implementation of the Compliance Directive in all the country companies, in particular the Group Guidelines which underpin risk management on the basis of specifications relating to behavior and reporting, approval regulations and dual-person principles for legal binding external declarations.

With the Messer Integrity Line, Messer provides a communication platform which can be used to report alleged misconduct in an uncomplicated fashion. Employees can address comments and suspicions on possible compliance infringements to a defined contact person, and do this simply, in line with legal requirements and on a trusting basis. Reports may be submitted not only by telephone, but also by e-mail in the local language. It is also possible to submit comments anonymously. In order to protect those making the reports, but also the persons to which the alleged abuse relates, we have introduced a directive which describes who can report what to whom. The Integrity Line and the directive are part of the Compliance Code. Compliance breaches are followed up and dealt with appropriately. They are also taken as an opportunity to consider preven-tive measures to stop the associated risk from occurring again in the future if possible.

Each year, the Chief Compliance Officer prepares a Compliance Report which is also discussed with the Audit Committee.

Messer Americas follows the Code of Conduct of the Messer Group in addition to a Code supplement applying to Messer Americas. The basis documents are supplemented by further guidelines on compliance with anti-trust law, anti-corruption regulations, business partner compliance and corresponding data protection guidelines for North America, Brazil, Columbia and Chile.

Messer Americas and the Messer Group share access to the common Messer Integrity Line. In addition, if relevant, reports submitted via a separate e-mail address for compliance issues are transferred to Messer Americas. The reported facts are documented and when the Messer Americas Integrity Line Committee (made up of representatives from the Legal and Compliance, HR and Internal Audit departments) considers this appropriate, are treated as Integrity Line cases.

Compliance training is a key element of the Messer Americas compliance program. In collaboration with the HR department, e-learning courses are aligned by the Legal and Compliance department to the specific circumstances of the Messer Americas unit. Two of these courses, dealing with respectful workplace interaction and "Ethics and Code of Conduct" must be completed by all employees. Additional courses on combating bribery and corruption and anti-trust law are mandatory for a specific group of employees, depending on the professional tasks and expected interaction with third parties. Employees have the obligation to take refresher training every two years, with the training contents being updated regularly.

Internal Audit

The duties of Internal Audit are performed by the Messer Group for Messer Western Europe. In fiscal 2021, Internal Audit implemented status audits at eight Western European companies. All Internal Audit audits include advisory activities with the objective of passing on best-practice information and organizing assistance across national borders; this is done taking due account of the respective current standards in the companies in the individual countries. When required, other headquarter functions are also included on an advisory basis (including SHEQ, Corporate Logistics, Central Sales functions). Compliance with Corporate Guidelines are audited and spot checks document controls implemented within the various process to check the effectiveness and efficiency of the processing as well as the accuracy and reliability of financial reporting. Findings can be clarified and suggestions made on improving the transparency of business processes. The Messer Group Supervisory Board regularly examines the quality of the audits and their appropriate intensity. The audit reports from Messer Western Europe are submitted not only to the Messer SE & Co. KGaA Management Board, but also to the Senior Vice President Western Europe and the Yeti GermanCo 1 GmbH Managing Director.

The internal audit duties for Messer Americas are performed by the Messer Americas Internal Audit. Internal audits comprise not only operating but also compliance and advisory audits. In fiscal year 2021, internal audits were conducted in the USA, Brazil and Canada. The audits related to the appropriateness and effectiveness of existing directives and processes on the basis of spot checks for transactions and internal controls and compliance with corporate directives and guide-lines. On the basis of these audits, observations and recommendations are made on optimizing/developing business processing, directives, processes and controls. In Messer Americas nine compliance and four advisory audits were implemented in 2021.

Bad Soden am Taunus, March 31, 2022

Yeti GermanCo 1 GmbH

Consolidated Financial Statements of Yeti GermanCo 1 GmbH

Consolidated Income Statement

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for the period from January 1 to December 31, 2021 (in K€)

	Note	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Revenue	4	2,118,710	1,965,492
Cost of sales	5	(1,073,993)	(1,001,068)
Gross profit		**1,044,717**	**964,424**
Selling and distribution expenses	6	(627,562)	(588,614)
Impairment on trade receivables	32	(921)	(2,861)
General and administrative expenses	7	(171,960)	(181,113)
Other operating income	8	54,218	27,310
Other operating expenses	9	(19,330)	(24,164)
Operating income		**279,162**	**194,982**
Income from investments accounted for using the equity method	10, 16	228	58
Other investment result, net	10	131	(968)
Finance income	10	13,100	11,369
Finance costs	10	(92,437)	(136,041)
Financial result, net		**(78,978)**	**(125,582)**
Profit before tax		**200,184**	**69,400**
Income/(expense) from income taxes	11	(52,806)	(16,939)
Profit after tax		**147,378**	**52,461**
Consolidated net profit		**147,378**	**52,461**
Attributable to:			
Shareholders of the parent company		146,740	51,737
Non-controlling interests		638	724

Consolidated Statement of Comprehensive Income

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for the period from January 1 to December 31, 2021 (in K€)

	Note	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Consolidated net profit		**147,378**	**52,461**
Items that may be reclassified to profit or loss			
Change in translation adjustments relating to foreign subsidiaries	30	39,492	(154,152)
Of which: Reclassifications of currency translation differences in conjunction with deconsolidation		–	–
Result from the net investment in a foreign operation	30	998	4,700
Deferred taxes	11	(233)	(1,038)
Derivative financial instruments			
Change in fair value of derivatives used for hedging purposes[1]	32	61,576	(14,113)
Reclassification to profit or loss	32	(5,233)	9,948
Deferred taxes	11	(11,996)	(569)
From associates accounted for using the equity method	16	–	–
		84,604	**(155,224)**
Items that will not be reclassified to profit or loss			
Remeasurement of net defined benefit obligation for pension plans and other employee benefits			
Change in remeasurement of the net defined obligation for pension plans	25	11,428	(3,507)
Deferred taxes	11	(3,120)	605
		8,308	**(2,902)**
Other comprehensive income		**92,912**	**(158,126)**
Total comprehensive income		**240,290**	**(105,665)**
Attributable to:			
Shareholders of the parent company		239,580	(105,815)
Non-controlling interests		710	150

[1] Gains/losses on financial instruments in effective hedges

For further information on equity, please refer to the comments on the consolidated statement of changes in equity below and note 30 “Equity” in the notes to the consolidated financial statements.

Consolidated Statement of Financial Position

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus) as of December 31, 2021 (in K€)

Assets	Note	Dec. 31, 2021	Dec. 31, 2020
Goodwill	14	602,187	566,429
Right-of-use assets	14	80,438	78,814
Other intangible assets	14	975,638	1,005,648
Property, plant and equipment	15	2,164,391	2,017,836
Investments accounted for using the equity method	16	5,792	5,680
Equity investments and other financial investments	17, 18	1,494	1,494
Deferred tax assets	11	20,569	16,909
Other financial assets	19	28,413	25,375
Non-financial assets	19	1,906	1,959
Non-current assets		**3,880,828**	**3,720,144**
Inventories	20	173,178	156,361
Trade receivables	21	283,289	256,792
Current income tax assets		42,532	45,285
Other current financial assets	23	169,547	24,434
Non-financial assets	23	51,347	42,788
Cash and cash equivalents	24	274,917	410,807
Current assets		**994,810**	**936,467**
Total assets		**4,875,638**	**4,656,611**

Consolidated Statement of Financial Position

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus) as of December 31, 2021 (in K€)

Equity and Liabilities	Note	**Dec. 31, 2021**	Dec. 31, 2020
Issued capital	30	30	30
Capital reserves	30	1,329,973	1,329,973
Retained earnings	30	208,181	53,133
Other components of equity	30	(98,475)	(183,007)
Equity attributable to shareholders of the parent company		**1,439,709**	**1,200,129**
Non-controlling interests	30	**3,586**	**3,648**
Equity		**1,443,295**	**1,203,777**
Provisions for employee benefits	25	35,866	47,162
Other provisions	26	69,278	60,932
Non-current financial liabilities	27	2,069,561	2,333,741
Deferred tax liabilities	11	510,753	466,019
Other non-current financial liabilities	28	–	2,052
Non-financial liabilities	28	12,563	–
Non-current liabilities		**2,698,021**	**2,909,906**
Other provisions	26	131,472	26,532
Current financial liabilities	27	27,877	23,375
Trade payables	32	194,171	148,045
Current income tax liabilities		39,958	27,022
Other current financial liabilities	29	71,193	83,099
Non-financial liabilities	29	269,651	234,855
Current liabilities		**734,322**	**542,928**
Total equity and liabilities		**4,875,638**	**4,656,611**

Consolidated Statement of Changes in Equity

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for fiscal 2021 (in K€)

		Reserves		Other components of equity					
	Issued capital	Capital reserves	Retained earnings	Currency translation reserve	Hedging reserve	Result from net investment	Equity attributable to shareholders of the parent company	Non-controlling interests	**Total equity**
As of Jan. 1, 2020	**30**	**1,329,973**	**4,298**	**(26,796)**	**(6,586)**	**5,025**	**1,305,944**	**4,195**	**1,310,139**
Consolidated net profit	–	–	51,737	–	–	–	51,737	724	52,461
Other comprehensive income	–	–	(2,902)	(153,578)	(4,734)	3,662	(157,552)	(574)	(158,126)
Total comprehensive income	**–**	**–**	**48,835**	**(153,578)**	**(4,734)**	**3,662**	**(105,815)**	**150**	**(105,665)**
Additions to/withdrawals from reserves	–	–	–	–	–	–	–	(1)	(1)
Distributions	–	–	–	–	–	–	–	(696)	(696)
Capital increase	–	–	–	–	–	–	–	–	–
Capital reduction	–	–	–	–	–	–	–	–	–
Additions/disposals of non-controlling interests	–	–	–	–	–	–	–	–	–
As of Dec. 31, 2020	**30**	**1,329,973**	**53,133**	**(180,374)**	**(11,320)**	**8,687**	**1,200,129**	**3,648**	**1,203,777**
As of Jan. 1, 2021	**30**	**1,329,973**	**53,133**	**(180,374)**	**(11,320)**	**8,687**	**1,200,129**	**3,648**	**1,203,777**
Consolidated net profit	–	–	146,740	–	–	–	146,740	638	147,378
Other comprehensive income	–	–	8,308	39,420	44,347	765	92,840	72	92,912
Total comprehensive income	**–**	**–**	**155,048**	**39,420**	**44,347**	**765**	**239,580**	**710**	**240,290**
Additions to/withdrawals from reserves	–	–	–	–	–	–	–	–	–
Distributions	–	–	–	–	–	–	–	(772)	(772)
Capital increase	–	–	–	–	–	–	–	–	–
Capital reduction	–	–	–	–	–	–	–	–	–
Additions/disposals of non-controlling interests	–	–	–	–	–	–	–	–	–
As of Dec. 31, 2021	**30**	**1,329,973**	**208,181**	**(140,954)**	**33,027**	**9,452**	**1,439,709**	**3,586**	**1,443,295**

For further information on equity, please refer to the comments under note 30 “Equity” in the notes to the consolidated financial statements.

Consolidated Statement of Cash Flows

of Yeti GermanCo 1 GmbH, Sulzbach (Taunus), for fiscal 2021 (in K€)

	Note	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Consolidated net profit before taxes		**200,184**	**69,400**
Income taxes paid		(37,352)	(283,160)
Depreciation of property, plant and equipment, amortization of intangible assets and impairment	14, 15	354,837	346,058
Losses/(gains) on disposal of fixed assets		344	(7,352)
Changes in investments in associates	16	(227)	(58)
Net interest income	10	64,245	85,816
Changes in inventories		1,641	13,191
Changes in trade receivables		(15,444)	(6,574)
Changes in provisions		(396)	(430)
Changes in trade payables		40,291	(14,891)
Changes in other liabilities and other assets		27,525	20,581
Cash flow from operating activities		**635,648**	**222,581**
Investments in property, plant and equipment and intangible assets		(292,464)	(240,746)
Capital reductions and dividends received from associates		235	136
Proceeds from disposals of property, plant and equipment and intangible assets		5,145	15,304
Interest received		4,259	7,316
Cash flow from investing activities		**(282,825)**	**(217,990)**
Proceeds from non-current financial liabilities		115	3,317
Proceeds from current financial liabilities		–	50
Repayments of non-current financial liabilities		(414,144)	(19,428)
Repayments of current financial liabilities		(116)	(69)
Payments for lease liabilities		(22,690)	(16,104)
Distributions to non-controlling interests		(772)	(696)
Interest paid		(62,852)	(91,185)
Other net finance costs		2,028	(9,680)
Cash flow from financing activities		**(498,431)**	**(133,795)**
Changes in cash and cash equivalents		**(145,608)**	**(129,204)**
Cash and cash equivalents at the beginning of the period		**410,807**	**577,422**
Currency translation effect on cash and cash equivalents		9,718	(37,411)
at the end of the period		**274,917**	**410,807**

Notes to the Consolidated Financial Statements of Yeti GermanCo 1 GmbH

1. General Information

Yeti GermanCo 1 GmbH (the "Company") is a holding company with the business address Messer-Platz 1, 65812 Bad Soden am Taunus, and is based in Sulzbach (Taunus), Germany, registered with the Frankfurt/Main Local Court under the number HRB 111626. Yeti GermanCo 1 GmbH is the parent company of the Messer Industries Group (the "Group"), which produces and sells industrial gases (in particular oxygen, nitrogen, argon, helium, carbon dioxide, hydrogen and rare and high-purity gases), processes for their use and systems located on the customer's property (on site plants) for gas production. The main customers of the Messer Industries Group include important companies from the manufacturing, chemical, steel-producing and pharmaceutical industries, the food industry and waste management.

Yeti GermanCo 1 GmbH was founded as a joint venture by Messer SE & Co. KGaA (until July 30, 2021: Messer Group GmbH) and CVC Capital Partners (CVC), UK, with the purpose of assuming the management of Messer's business in Western Europe and the Americas. In this context, Messer SE & Co. KGaA has contributed its Western European operating activities in Spain, Portugal, Switzerland, France, Belgium, the Netherlands, Denmark, Germany and the company in Algeria, plus a right-of-use asset for the ‚Messer – Gases for Life' brand, to the joint venture for a period of ten years as of March 1, 2019. The requirements of section 315e (3) of the Handelsgesetzbuch (HGB – German Commercial Code) for the preparation of the consolidated financial statements of Yeti GermanCo 1 GmbH in accordance with the International Financial Reporting Standards (IFRS), as adopted in the EU, have been satisfied.

The reporting date for Yeti GermanCo 1 GmbH and all the subsidiaries included in the consolidated financial statements is December 31 of the calendar year.

After being prepared by the Managing Director, the consolidated financial statements of the Company for the fiscal year ended December 31, 2021 were submitted to the Audit Committee of the Advisory Board of the Messer Industries Group on March 31, 2022. After being discussed by the Audit Committee, the managing directors will present the consolidated financial statements to the shareholders for approval.

Messer GasPack 2 GmbH, Messer Industriegase GmbH, Messer Industries GmbH, Messer Produktionsgesellschaft mbH Salzgitter, Messer Produktionsgesellschaft mbH Siegen, Messer Produktionsgesellschaft mbH Speyer, Yeti GermanCo 2 GmbH, Yeti GermanCo 3 GmbH, all consolidated domestic subsidiaries, will use the exemption provisions in accordance with section 264 (3) HGB and will therefore not disclose their annual financial statements for 2021, nor will they prepare (HGB) notes or a management report.

2. Accounting Policies

Basis of preparation

The consolidated financial statements are prepared in euro. Unless stated otherwise, all amounts are rounded to thousands (K€). Differences may arise due to rounding.

Statement of compliance with IFRS

The consolidated financial statements for 2021 have been prepared in accordance with International Financial Reporting Standards (IFRS) and the Interpretations of the IFRS Interpretations Committee (IFRS IC), as applicable in the EU. The accounting policies on which the 2021 consolidated financial statements are based have been applied consistently.

The consolidated financial statements have been prepared on the basis of historical cost, amortized cost and the fair value from market measurement of available-for-sale financial assets and financial liabilities (including derivative financial instruments).

Estimates are required in order to prepare the consolidated financial statements in accordance with IFRS and the Interpretations issued by the IFRS Interpretations Committee, as applicable in the EU. Moreover, the application of uniform Group accounting policies requires judgments on the part of management.

New financial reporting standards and interpretations

The following new or revised standards and interpretations are effective for the first time for these consolidated financial statements on January 1, 2021:

- Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – Interest Rate Benchmark Reform – Phase 2
- Amendments to IFRS 4- Extension of the Temporary Exemption from Applying IFRS 9
- Amendments to IFRS 16 – Covid-19-Related Rent Concessions (effective from June 1, 2020)

Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – Interest Rate Benchmark Reform – Phase 2

The amendments of the second phase of the project relating to the interest rate benchmark reform (Amendments to IFRS 9 Financial Instruments, IAS 39 Financial Instruments: Recognition and Measurement, IFRS 7 Financial Instruments: Disclosures, IFRS 4 Insurance Contracts and IFRS 16 Leases) supplement the specifications of the first phase of the project and relate to the replacement of an interest rate benchmark with an alternative interest rate benchmark.

In respect to accounting for financial instruments, the following aspects are particularly impacted:

With changes to the contractual cash flows on the basis of the amendments, it may not be necessary to adjust or derecognize the carrying amount of financial instruments. Rather in certain circumstances the option is granted to adjust the effective interest rate to reflect the change to the alternative interest rate benchmark.

In respect to hedge accounting, on the basis of the amendments in certain cases it is not necessary to terminate a hedge designated for the purposes of hedge accounting as a result of the amendment triggered by the reform of the interest rate benchmarks.

New risks resulting from the reform and also how the transition to alternative interest rate benchmarks is being handled are to be disclosed.

In addition to amendments to IFRS 9, IAS 39 and IFRS 7, IASB adopted minor amendments to IFRS 4 and IFRS 16.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Amendments to IFRS 4- Extension of the Temporary Exemption from Applying IFRS 9

The amendments to IFRS 4 aim to address the temporary accounting consequences of the different effective dates of IFRS 9 Financial Instruments and the forthcoming IFRS 17 Insurance Contracts. In particular, the amendments to IFRS 4 extend the expiry date of the temporary exemption from applying IFRS 9 until 2023 in order to align the effective date of IFRS 9 with the new IFRS 17.

The changes have no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

Amendments to IFRS 16 – COVID-19-Related Rent Concessions

IFRS 16 specifies how lessees should account for changes in lease payments, including concessions. For each lease, the lessee must assess whether the rent concession is a modification of the lease and thus remeasure the lease liability.

The amendment to IFRS 16 grants a practical expedient if applied. This is temporary and subject to meeting certain conditions. Under the practical expedient, lessees may elect not to assess whether certain COVID-19-related rent concessions are lease modifications and account for these rent concessions as if they were not lease modifications. The amendments are effective for reporting periods beginning on or after June 1, 2020.

This has no material impact on these consolidated financial statements of Yeti GermanCo 1 GmbH.

New financial reporting standards not yet effective:

The following new standards and amendments to standards were not yet effective for these consolidated financial statements and were therefore not applied, but had already been endorsed by the EU and will be binding from fiscal years starting on April 1, 2021, or later:

- Amendments to IFRS 16 COVID -19-Related Rent Concessions after June 30, 2021 (effective from April 1, 2021)
- Amendments to IFRS 3 – References to the Conceptual Framework (effective from fiscal 2022)
- Amendments to IAS 16 – Property, Plant and Equipment – Proceeds before Intended Use (effective from fiscal 2022)
- Amendments to IAS 37 – Onerous Contracts – Cost of Fulfilling a Contract (effective from fiscal 2022)
- Annual Improvements to IFRS 2018-2020 Cycle – Amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41 (effective from fiscal 2022)
- IFRS 17 (including amendments to IFRS 17) – Insurance Contracts (effective from fiscal 2023)

The following new standards and amendments to standards had already been published, but had not yet been adapted by the EU Commission and were therefore not applied:

- Amendments to IFRS 10 and IAS 28 – Sale or Contribution of Assets between an Investor and its Associate or Joint Venture (effective date deferred indefinitely)
- Amendments to IAS 1 – Classification of Liabilities as Current or Non-Current (effective from fiscal 2023)
- Amendments to IAS 1 and IFRS Practice Statement 2 – Disclosure of Accounting Policies (effective from fiscal 2023)
- Amendments to IAS 8 – Definition of Accounting Estimates (effective from fiscal 2023)
- Amendments to IAS 12 – Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction (effective from fiscal 2023)
- Amendments to IFRS 17 – Initial Application of IFRS 17 and IFRS 9 – Comparative Information (effective from fiscal 2023)

The Group is not planning early adoption of the new or amended standards and interpretations that become effective in subsequent fiscal years. Unless stated otherwise, the impact on the consolidated financial statements of Yeti GermanCo 1 GmbH is currently being examined.

Consolidation principles

A complete list of the Group's equity investments can be found in the annex to these notes. Material subsidiaries as of December 31, 2021 are:

Name and registered office of subsidiary	Country	Shareholding in percent Dec. 31, 2021	Shareholding in percent Dec. 31, 2020
Messer LLC Inc., Delaware	USA	100 %	100 %
Messer Canada Inc., Ontario	Canada	100 %	100 %
Messer Gases Ltda., Sao Paulo	Brazil	100 %	100 %
Messer France S.A.S., Suresnes	France	100 %	100 %

The consolidated financial statements comprise the financial statements of Yeti GermanCo 1 GmbH and the financial statements of its subsidiaries as of December 31, 2021. The financial statements of the subsidiaries are prepared using uniform accounting policies and for the same reporting period as the financial statements of the parent company.

a. Subsidiaries

Yeti GermanCo 1 GmbH and its subsidiaries controlled by Yeti GermanCo 1 GmbH are included in the consolidated financial statements as of December 31, 2021. The Group controls an entity when it has exposure or rights to variable returns from its involvement with the entity and the ability to utilize its control so as to influence the amount of returns from the entity. Subsidiaries are included in the consolidated financial statements from the date on which control is achieved and until the date on which control ends.

All receivables and liabilities, revenue, income and expenses arising from intra-group transactions are eliminated in the consolidated financial statements. Intra-group transactions are performed on the basis of full cost transfer prices.

Subsidiaries are accounted for using the acquisition method. The cost of the acquisition represents the fair value of the assets transferred, the liabilities incurred or assumed and the equity interests issued by the acquirer at the transaction date. It also includes the fair value of any recognized assets or liabilities resulting from a contingent consideration arrangement. Assets, liabilities and contingent liabilities identifiable in conjunction with a business combination are measured at fair value as of the acquisition date on initial consolidation.

Acquisition-related costs are recognized as an expense in the period in which they are incurred.

In a business combination achieved in stages, any previously held equity interest in the acquiree is remeasured at fair value as of the acquisition date. Any resulting gain or loss is recognized in the income statement.

Goodwill is measured as the excess of the cost of the acquisition, the amount of any non-controlling interest in the acquiree and the fair value of any previously held equity interest at the date of acquisition over the Group's share of the net assets measured at fair value. The option of accounting for goodwill using the full goodwill method is not exercised. If the cost is less than the fair value of the net assets of the subsidiary acquired, the difference is reassessed and then recognized directly in profit or loss. The results of the subsidiaries acquired or sold during the fiscal year are included in the consolidated income statement from the time control is achieved or until control is lost.

b. Transactions with non-controlling interests without loss of control

Transactions with non-controlling interests without a loss of control are treated in the same way as transactions with the Group's equity owners. Any difference arising from the acquisition of a non-controlling interest between the consideration paid and the relevant share in the carrying amount of the net assets of the subsidiary is recognized in equity. Gains and losses arising from the disposal of non-controlling interests are also recognized in equity.

c. Disposal of subsidiaries

If the Group loses control of an entity, the Group's remaining interest is remeasured at fair value and the resulting difference recognized in profit or loss. Furthermore, all amounts reported in other comprehensive income relating to this entity are accounted for as if the parent company had directly disposed of the related assets or liabilities. This means that any profit or loss previously recognized in other comprehensive income is reclassified either to profit and loss or to retained earnings.

d. Associates, joint ventures and joint operations

Investments in entities over which the Group has significant influence but without control or joint control over financial and operating policy and joint ventures over which the Group has joint control are accounted for using the equity method ("equity Investments"). These are initially measured at cost, including transaction costs. Significant influence is assumed if the Group holds 20 % or more of the voting power but does not control the investee. The Group's share in earnings of equity investments is shown under "Income from investments accounted for using the equity method". The carrying amounts of equity investments are written down if impaired. The Group's interest in associates and joint ventures includes the goodwill arising on acquisition (net of accumulated impairment losses).

If the ownership interest in an associate or joint venture is reduced but the investment continues to be an associate or joint venture, only a proportionate amount of the gain or loss previously recognized in other comprehensive income is reclassified to profit or loss, if this would also occur on the disposal of the individual assets and liabilities.

The Group's share of the profit or loss of associates and joint ventures is recognized in profit or loss from the acquisition date. Changes in reserves are recognized pro rata in consolidated reserves. Accumulated changes after acquisition are offset against the carrying amount of the investment. If the Group's share of the loss in an associate or joint venture is equal to or exceeds the Group's share in this investee, including other unsecured receivables, the Group recognizes no further losses unless it has entered into commitments for the associate or joint venture or has made payments for the associate or joint venture.

As of the end of each reporting period, the Group determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If this is the case, the difference between the carrying amount and the recoverable amount is recognized as an impairment loss and reported in the income statement under the income from the investment in the associate or joint venture.

To the extent that a Group entity performs transactions with an associate or joint venture, any unrealized gains or losses are eliminated on the basis of the Group's interest in this entity.

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the assets, and obligations for the liabilities, relating to the arrangement.

The associated assets and liabilities, income and expenses from joint operations are included in the consolidated financial statements according to the economically attributable share.

The Group recognizes its direct rights to the assets, liabilities, revenue and expenses of joint operations and their share in any assets, liabilities, revenue and expenses jointly managed or incurred. These are included in the financial statements under the corresponding line items. Details of joint operations recognized in the financial statements can be found under note 16 "Interests in Other Entities".

Currency translation

a. Functional currency and reporting currency
The consolidated financial statements are presented in euro, the Group's reporting currency. The functional currency of individual foreign operations is determined by the economic environment in which they operate. The items included in the financial statements of the respective company are measured using this functional currency.

b. Transactions and balances
Foreign currency transactions are initially translated using the spot exchange rate between the foreign currency and the functional currency at the transaction date. Monetary assets and liabilities denominated in a foreign currency are translated into the functional currency at the closing rate. All exchange differences are recognized in profit or loss. This does not include exchange differences from certain intragroup foreign currency borrowings to the extent that they are used to hedge net investments in foreign operations. These exchange differences, and any deferred taxes arising from them, are recognized directly in equity. Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

Foreign currency gains and losses that essentially result from trade receivables and trade payables denominated in foreign currencies are included in "Other operating income" or "Other operating expenses".

c. Group companies

The functional currency of foreign operations not based within the area of the European Currency Union (ECU) is the respective local currency. As of the end of the reporting period, assets and liabilities of these subsidiaries are translated into the Messer Industries Group's reporting currency using the closing rate. Income and expenses are translated at average rates for the fiscal year. The resulting exchange differences are recognized through other comprehensive income and included in currency translation reserves within equity. They therefore do not affect profit or loss. When a foreign operation is deconsolidated, the cumulative amount recognized in equity for this foreign operation is reversed to profit or loss.

The following table shows an overview of the exchange rates used for the principal currencies:

		Average rates		Closing rates	
Selected currencies	ISO code	**Jan. 1 – Dec. 31, 2021 € 1**	Jan. 1 – Dec. 31, 2020 € 1	**Dec. 31, 2021 € 1**	Dec. 31, 2020 € 1
Brazilian real	BRL	6.38	5.88	6.31	6.37
Canadian dollar	CAD	1.49	1.53	1.44	1.56
Swiss franc	CHF	1.08	1.07	1.03	1.08
US dollar	USD	1.19	1.15	1.13	1.23

Intangible assets and goodwill

The differences between the consideration transferred by the Messer Industries Group for acquirees and the fair value of the assets acquired, liabilities assumed and contingent liabilities are recognized in accordance with IFRS 3.32 et seq. The remaining goodwill is tested for impairment in accordance with IAS 36 at least once a year.

The other intangible assets such as brands, patents, licenses, customer bases, software, etc. are initially measured at cost. Patents, licenses, customer bases and software, etc. are amortized on a straight-line basis over their expected useful lives of three to 47.5 years. The amortization charge on other intangible assets is reported within the related expense item, usually cost of sales or distribution and selling expenses. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each fiscal year.

Property, plant and equipment

Property, plant and equipment are recognized at cost and depreciated over their expected useful lives. The cost of acquired property, plant and equipment includes all costs directly attributable to their acquisition. The cost of self-constructed items of property, plant and equipment includes all directly attributable direct costs and an appropriate share of overheads, including depreciation, and are therefore measured taking all costs required to construct the assets into account. In the event of a statutory requirement to restore an item to its original condition, the cost also includes the present value of expected future payments for decommissioning and restoration. When each major inspection is performed, in accordance with IAS 16.14, its cost is recognized in the carrying amount of the item of property, plant and equipment as a replacement if the recognition criteria are satisfied.

Subsequent costs are only recognized as part of the cost of the asset or as a separate asset when it is probable that they will result in future economic benefits to the Group and the costs can be measured reliably.

Expenditure for repairs and maintenance, which does not represent a significant replacement investment, is recognized as an expense in the fiscal year in which it is incurred.

Gains and losses on the disposal of property, plant and equipment are calculated as the difference between proceeds from disposal and the carrying amounts of the assets and recognized in the consolidated income statement.

Depreciation is recognized on a straight-line basis over the following useful lives:

Depreciation	Useful life in years
Buildings	10 - 50
Plant and machinery	5 - 20
thereof air separation units	15
Other operating and office equipment	3 - 10

The residual carrying amounts and useful lives are reviewed at the end of each reporting period and adjusted as necessary. If the carrying amount of an item of property, plant and equipment exceeds the estimated recoverable amount, it is written down to that recoverable amount.

Borrowing costs are recognized as an expense in the period in which they are incurred, except when they relate to qualifying assets. Within the Messer Industries Group, these chiefly relate to air separation units. Borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized as part of the cost of that asset up to the date when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete. A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale.

Leases

a. Leases in which the Group is the lessee

The Group leases various offices, warehouses, equipment and vehicles. Leases are generally concluded for fixed periods of one month to 10 years for movable assets and for one month to 50 years for immovable assets, but may have extension options.

At the inception of a contract, the Group assesses whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group uses the IFRS 16 definition of a lease to assess whether a contract includes the right to control an identifiable asset.

Contracts may contain both lease and non-lease components. The Group assigns the transaction price to these components based on their relative stand-alone prices. However, for leases of real estate for which the Group is a lessee, it has elected not to separate lease and non-lease components and instead accounts for these as a single lease component.

Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. Leased assets may not be used as security for borrowing purposes.

Leases are recognized as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable;
- variable lease payment that are based on an index or a rate, initially measured using the index or rate as of the commencement date;
- amounts expected to be payable by the Group under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise that option; and
- payments of penalties for terminating the lease, if the lease term reflects the Group exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability. The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases in the Group – the lessee's incremental borrowing rate is used.

To determine the incremental borrowing rate, the Group uses recent third-party financing received by the individual lessee as a starting point. Lessees are divided into regions according to geographical segments. The financing is divided into groups based on the remaining terms of the contracts (up to 1 year, up to 2 years, up to 3 years, up to 4 years, up to 5 years and longer than 5 years). The calculated average interest rates for each group and region are used in measuring the right-of-use asset and lease liability.

The Group is exposed to potential future increases in variable lease payments based on an index or rate. These possible changes in lease payments are not taken into account in the lease liability until they take effect. When adjustments to lease payments based on an index or rate take effect, the lease liability is reassessed and adjusted against the right-of-use asset.

Lease payments are allocated between principal and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date less any lease incentives received;
- any initial direct costs; and
- estimated costs incurred by the lessee in dismantling or removing the underlying asset, restoring the location where it is to be found or restoring the underlying asset to the condition required in the lease agreement.

Right-of-use assets are generally depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. If the Group is reasonably certain to exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Depreciation is recognized on a straight-line basis over the following useful lives:

Depreciation	Useful life in years
Land	1 - 50
Buildings	1 - 30
Plant and machinery	1 - 10
Other operating and office equipment	1 - 11

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognized as an expense in profit or loss. Short-term leases are leases with a lease term of twelve months or less. Low-value assets essentially comprise IT equipment and other equipment.

Extension and termination options are included in a number of property and equipment leases across the Group. These are used to maximize operational flexibility in terms of managing the assets used in the Group's operations. These options are taken into account in the measurement of right-of-use assets and lease liabilities when there is reasonable assurance.

The assessments of reasonable certainty are only revised if a significant event or a significant change in circumstances occurs, which affects this assessment, and that is within the control of the lessee.

b. Leases in which the Group is the lessor

If the Group is the lessor, it classifies each lease as either a finance lease or an operating lease at inception of the lease. At Messer Industries this covers especially certain gas supply contracts, in particular those for the gas generation plants rented on a long term basis.

Leases in which a significant portion of the risks and rewards of ownership transfers to the lessee are classified as finance leases.

In this case, disposal is assumed at the start of the lease term and revenue is recognized in the amount of the present value of the minimum lease payments attributable to the asset. In return, a claim against the customer is recognized that is reduced over the term of the contract. Interest income earned on finance leases is reported as other financial income.

Leases in which a significant portion of the risks and rewards of ownership remain with the lessor, are classified as operating leases. Payments made in connection with an operating lease are recognized as revenue from other revenue sources in the income statement on a straight-line basis over the term of the lease.

Impairment and reversal of impairment on goodwill, right-of-use assets, other intangible assets and property, plant and equipment

An impairment test for goodwill, right-of-use assets, other intangible assets and property, plant and equipment involves comparing the recoverable amount of the asset against its carrying amount to determine whether it must be written down to recoverable amount. In accordance with IAS 36, goodwill is allocated to the smallest cash-generating unit for which goodwill is monitored by management. The recoverable amount is defined as the higher of the asset's fair value less costs to sell and its value in use. Fair value less costs to sell is defined as the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal. Value in use is the present value of future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. In the event of impairment, existing goodwill is reduced first. If the impairment loss exceeds the carrying amount of goodwill, the difference is typically distributed among the remaining non-current assets pro rata. With the exception of goodwill, impairment losses are reversed when the reasons for the impairment no longer apply. Impairment losses and required reversals are shown together with depreciation and amortization in the statement of changes in assets under additions to cumulative depreciation and amortization, and are reported and explained separately in the notes.

Inventories

Inventories are measured at the lower of cost or net realizable value at the end of the reporting period using the average cost method. Their production cost includes all directly attributable direct costs, appropriate portions of materials and production overheads and depreciation.

Trade and other receivables

Trade receivables are recognized from the date they arise. Items that do not contain a significant financing component are initially measured at the transaction price. The corresponding impairment loss is measured at an amount equal to lifetime expected credit losses, based on an analysis of historical default data and forecasts of future economic conditions. Expected credit losses are a probability-weighted estimate of credit losses.

Cash and cash equivalents

Cash and cash equivalents include freely available cash on hand and demand deposits. Cash equivalents also include short-term liquid financial assets that can be readily converted into cash at any time. This risk of fluctuations in value is immaterial.

Employee benefits

a. Pension obligations
The Group has both defined benefit and defined contribution pension plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate non-Group entity (a fund). The Group does not have any legal or constructive obligation to pay any additional amounts if the fund does not have sufficient assets to meet the pension entitlements of all employees for the current and past fiscal years.

Typically, defined benefit plans set out an amount of pension benefits that employees will receive on retirement and that is typically dependent on one or more factors (such as age, length of service and salary).

The Group's obligations from defined benefit pension plans are calculated separately for each defined benefit plan and according to actuarial principles. The benefits earned by employees in the current and previous periods – in return for their service – are initially estimated. The present value of the defined benefit obligation, the gross pension obligation, is calculated by actuaries using the projected unit credit method. Plan assets are deducted from the gross pension obligation at fair value. This results in the net liability or the net asset value to be recognized.

The Group determines net interest expense (net interest income) from the net liability (net asset value) by multiplying the net liability (net asset value) at the beginning of the period by the interest rate with which the defined benefit gross pension obligation is discounted at the beginning of the period.

The interest rate is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. The currency and term of the underlying corporate bonds are consistent with the currency and estimated term of the post-employment obligations.

The calculation of the net liability (net asset) is based on an actuarial report prepared by a qualified actuary as of the end of each reporting period.

If the deduction of plan assets from the defined benefit gross pension obligation results in an excess of plan assets, the amount of the net asset value is limited to the present value of the economic benefits associated with the plan asset surplus, e. g. in the form of reimbursements from the plan or reduced future contribution payments if the Group has control over these economic ad-vantages. Control is assumed to exist if the Group can realize the economic benefit within the term of the pension plan or on settlement of plan liabilities.

The calculation of the present value of the economic benefits of the excess of plan assets takes into account any minimum funding requirements.

The amounts arising on remeasurement comprise actuarial gains and losses arising on the measurement of the defined gross pension obligation on the one hand and the difference between the actual return on plan assets and the rate of return assumed at the beginning of the reporting period on the other hand. In the event that there is an excess of plan assets, the amounts arising on remeasurement also include the change from applying an asset ceiling, to the extent that this has not been considered as part of the net interest component.

The Group recognizes all amounts arising on remeasurement in other comprehensive income (OCI), while other components of the net pension expense (service cost and net interest component) are recognized in profit or loss. The interest portion of the addition to provisions included in pension expense is reported as interest expense within net finance costs. The cumulative remeasurement effects are reported in retained earnings within equity.

If the present value of a defined benefit obligation changes as a result of a plan amendment or curtailment, the Group recognizes the resulting effect as past service cost in profit or loss. The amounts are recognized when the amendment or curtailment occurs.

Defined benefit plans expose the Group to various risks. In addition to general actuarial risks such as longevity risk and interest rate risk, the Group is exposed to currency risk and capital market/investment risk.

b. Obligations from bonus plans

Obligations for bonus payments are recognized as a liability and as an expense. A provision is recognized in the consolidated financial statements in cases in which there is a contractual obligation or a constructive obligation as a result of past business practices.

Other provisions

Other provisions are recognized for present legal and constructive obligations arising from past events that are likely to result in a future outflow of resources embodying economic benefits, provided that a reliable estimate can be made of the amount of the obligations. If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, when appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as interest expense.

Government grants

Government grants are recognized where there is reasonable assurance that the grant will be received and all attached conditions will be complied with. When the grant relates to an expense item, it is recognized as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. If the grant relates to an asset, it is recognized as deferred income and reversed to profit or loss on a straight-line basis over the expected useful life of the asset.

Financial instruments: principles

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. A distinction is made between derivative and non-derivative financial instruments.

Derivative financial instruments can be embedded in other financial instruments or non-financial instruments. In accordance with IFRS, an embedded derivative must be separated from the host contract and measured separately at its fair value if the economic characteristics of the embedded derivative are not closely related to those of the host contract. The Messer Industries Group had no separable embedded derivatives in the fiscal year. Compound financial instruments issued that contain both an equity and a debt component must be accounted for separately on the basis of the substance of the instruments. The Messer Industries Group was not party to any hybrid or compound financial instruments in the fiscal year. Regular way purchases and sales of financial instruments are typically recognized by the Messer Industries Group as of the settlement date, while derivatives are recognized as of the trade date.

Financial assets and financial liabilities are initially recognized at fair value, including any transaction costs if necessary. The fair value of a financial instrument is the price that would be achieved between market participants on the measurement date for the sale of the financial instrument.

Financial assets are derecognized fully or in part when the contractual rights to receive cash flows have expired or if control over the financial asset and substantially all the risks and rewards of the asset have been transferred to a third party. Financial liabilities are derecognized when the contractual obligations have been settled, canceled or have expired.

The classes to be formed in accordance with IFRS 7 include the measurement categories presented below. Furthermore, liabilities from leases and hedging derivatives in the context of hedge accounting are included in the classes according to IFRS 7.

Financial assets

Financial assets are classified according to the following IFRS 9 measurement categories:

a. Financial assets at amortized cost (AC)
The Messer Industries Group classifies its financial assets as at amortized cost only if both of the following criteria are met:

- the asset is held within a business model whose objective is to collect the contractual cash flows; and
- the contractual terms give rise to cash flows that are solely payments of principal and interest.

b. Financial assets at fair value through profit or loss (FVTPL)
The Messer Industries Group classifies the following primary financial assets at fair value through profit or loss:

- debt investments that do not qualify for measurement at either amortized cost or fair value through other comprehensive income;
- equity investments that are held for trading; and
- equity investments for which the entity has not elected to recognize fair value gains and losses through other comprehensive income.

The Group has not designated any primary financial assets at fair value through profit or loss.

c. Financial assets at fair value through other comprehensive income (FVOCI)
Financial assets at fair value through other comprehensive income comprise:

- Equity securities which are not held for trading, and which the Messer Industries Group has irrevocably elected at initial recognition to recognize in this category. These are stra-tegic investments and the Group considers this classification to be more relevant.
- Debt securities where the contractual cash flows are solely principal and interest and the objective of the Group's business model is achieved both by collecting contractual cash flows and selling financial assets.

The results of measuring such investments in equity instruments are reported in other comprehensive income and remain there even in the event of a sale. On disposal of these debt securities, any related balance within other comprehensive income is reclassified to retained earnings.

Financial liabilities

a. Financial liabilities at amortized cost (AC)
Financial liabilities at amortized cost are non-derivative financial liabilities that are subsequently measured at amortized cost using the effective interest method. Any difference between the amount received and the amount repayable is recognized as income or expense over the term of the instrument. Transaction costs incurred are deducted from the respective financial liabilities and amortized over the term of the underlying liability using the effective interest method. Within the Messer Industries Group, this measurement category includes in particular financial liabilities, trade payables and non-derivative other current and non-current liabilities.

b. Financial liabilities at fair value through profit or loss (FVTPL)
Financial liabilities at fair value are either classified as held for trading or designated upon initial recognition as at fair value through profit or loss.

These financial liabilities are subsequently measured at fair value, with gains and losses from the financial instruments in this category recognized directly in net finance costs in the income statement.

Derivative financial instruments and hedging

Derivatives are initially recognized at fair value on the date a derivative contract is entered into, and they are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument and, if so, the nature of the item being hedged. When entering into a derivative contract, the Messer Industries Group designates it as either.

(1) a hedge of the fair value of recognized assets or liabilities (fair value hedges); or
(2) a hedge of a forecast transaction or firm commitment (cash flow hedge).

The Messer Industries Group exclusively uses derivatives for hedging if this is required by the hedged items. This applies, for example, to risks from energy purchases, variable interest payments and exchange rate fluctuations. Hedged items are the obligations contractually entered into to achieve the goals of the Messer Industries Group, receivables and anticipatory transactions. Derivative instruments are thus exclusively used to safeguard the Messer Industries Group’s business performance to the extent stipulated in its Articles or Association. Macro hedging, i.e. the consolidation of individual positions in order to merely hedge the net amount, is not practiced.

Most of the transactions for which this type of hedging could be applied are hedged in full in terms of scope or amount, using a variety of financial instruments. The selection of individual instruments is always a management decision, made in line with the risk profile, i.e. the opportunity for return associated with the respective risk.

Hedge accounting is used for a majority of the existing hedging transactions. Nevertheless, there are derivatives that have been contracted to hedge risks from items, for which the formal requirements have not been fully met and which are therefore not recognized in hedge accounting, but rather as stand-alone derivatives at fair value through profit and loss in accordance with IFRS 9.

The aim of hedge accounting is to largely offset the changes in the value of the hedging instruments and the hedged items. Messer uses hedge accounting in accordance with IFRS 9 to avoid fluctuations in the income statement due to the different measurement of hedged items and hedging instruments.

When entering into the transaction, the Group documents the relationship between the hedging instrument and the hedged item in addition to the objective of its risk management and its underlying strategy. In addition, at the inception of the hedge and thereafter, the Group documents its assessment of whether the derivatives used in the hedge are highly effective at compensating for the changes in the fair value or cash flow. Hedge accounting is only maintained as long as its effectiveness can be proven. Evidence of this effectiveness is determined by comparing the contract specifics, maturities and volumes (critical terms match) and by means of a regression analysis.

For those hedges for which hedge accounting is used, the gain or loss on remeasurement is bro-ken down into effective and ineffective portions. The effective portion is the portion of the gain or loss on remeasurement that represents an effective hedge against the risk. For cash flow hedges, this is recognized separately in other comprehensive income. The ineffective portion, where nec-essary, is immediately recognized in the consolidated income statement.

Derivative financial instruments not subject to hedge accounting are also measured at fair value through profit or loss.

The fair value of financial instruments is determined in accordance with IFRS 13. The fair value is derived from financial instruments quoted on an active market or calculated using standard measurement models (discounted cash flow method) from current market prices. If necessary, the market value provided by a bank can also be used.

a. Cash flow hedges

Changes in the fair values of derivatives classified as cash flow hedges that are a close match for the hedged item are recognized in equity. If the forecast transaction or firm commitment results in the recognition of a non-financial asset or non-financial liability, the gains and losses previously deferred in equity are removed from equity and included in the measurement of the cost of the asset or liability. In all other cases, the gains or losses previously recognized in equity are transferred to profit or loss in the same period as that in which the hedged forecast transaction or firm commitment is recognized in profit or loss.

Income and operating cash flow are essentially unaffected by market interest rates, as the Group does not hold any significant interest-bearing assets. Variable interest loans are partially hedged using interest rate swaps and caps (cash flow hedge for future interest payments). This effectively converts loans with floating interest rates into loans with fixed interest rates.

When a hedging instrument expires or is sold, or when a hedging instrument no longer meets the criteria for hedge accounting in accordance with IAS 9, any cumulative gains or losses recognized in equity to date remain there and are not removed until the forecast transaction or firm commitment is recognized in profit or loss. However, if the forecast transaction or firm commitment is no longer expected to occur, the cumulative gain or loss that had been recognized directly in equity is recognized in profit or loss.

b. Fair value hedges

The changes in the fair value of derivatives that are designated as a fair value hedge and are a close match for the underlying transaction are recognized in the income statement together with the changes in the fair value of the hedged assets or liabilities attributable to the hedged risk.

The fair values of the various derivative financial instruments are listed under note 32 “Other Financial Instrument Disclosures”.

There were only cash flow hedges on December 31, 2021.

Management of financial risks

In conjunction with its operating activities, the Messer Industries Group is exposed to various financial risks, in particular credit, liquidity, interest and currency risk, which are described in more detail below under note 32 “Other Financial Instrument Disclosures”. The Group’s risk management system takes into account the fact that financial market developments are not foreseeable and is intended to minimize any potential negative impact on the Group’s financial position. The Group uses derivative financial instruments to hedge against specific risks.

Risk management is handled by Group Treasury in compliance with guidelines approved by management. Group Treasury identifies, assesses and hedges financial risks. The guidelines contain general principles for risk management and detailed rules for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash.

Use of assumptions, estimates and judgments

The preparation of IFRS financial statements requires management to make certain assumptions, estimates and judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities as of the end of the reporting period and the reported amounts of revenue and expenses for the fiscal year. The estimates and assumptions concern the future. Actual results may therefore differ from these estimates.

Estimates and their underlying assumptions are examined on an ongoing basis. Revisions of estimates are recognized prospectively. If a change in an accounting estimate gives rise to changes in assets and liabilities, or relates to an item of equity, the changes in estimates are recognized by adjusting the carrying amounts of the related assets, liabilities or equity items.

COVID-19 has no material effect on the assessment of the underlying estimates and assumptions in fiscal 2021.

Judgments, assumptions concerning the future and sources of estimation uncertainty that could potentially have the greatest impact on these consolidated financial statements were required in particular for:

a. Income taxes (note 11)
IFRIC 23 clarifies the recognition and measurement requirements of IAS 12 in accounting for uncertainties in income taxes. Estimates and assumptions must be made for recognition and measurement, e. g. whether an assessment is made separately or together with other uncertainties, whether a probable or expected value is used for the uncertainty and whether changes have occurred compared to the previous period. The detection risk is irrelevant for the accounting of uncertain statement of financial position items. The accounting is based on the assumption that the tax authorities are investigating the matter in question and that they have all the relevant information.

b. Goodwill impairment testing (note 14)
Impairment is tested in accordance with IAS 36 on the basis of the expected future cash flows of these cash-generating units or groups of cash-generating units over the detailed planning period of four years and is subject to estimates made by the Group. Judgments are also required to derive capitalization rates. A change in the factors used when testing goodwill and other intangible assets or property, plant and equipment for impairment may lead to higher, lower or no impairment.

c. Determination of useful lives of property, plant and equipment and assessing which cost components can be capitalized (note 15)
Group-wide uniform useful lives for items of property, plant and equipment are determined on the basis of past experience and regularly reviewed. As part of the process of assessing whether an item is eligible for recognition as an asset and which components of cost should be taken into account, we make assumptions regarding the expected future usability of the asset.

d. Assessment of the need for and measurement of allowances for doubtful debts (note 19, 21, 32)
When recognizing allowances for doubtful debts, estimates are made regarding the creditworthiness of individual customers and market segments, and general economic forecasts for the different countries and the history of our bad debts.

e. Measurement of pension obligations (note 25)
Obligations from defined benefit pension commitments are calculated on the basis of actuarial assumptions. These are mainly the discount rate, life expectancy and pension and salary trends. The interest rate is determined by reference to market yields at the end of the reporting period on high quality corporate bonds. Sensitivity analyses with respect to the interest rate used are provided in the notes.

f. Recognition and measurement of other provisions (note 26)
Other provisions are recognized and measured on the basis of an assessment of the probability of a future outflow of benefits, using values based on experience and circumstances known as of the end of the reporting period. The actual outflow of economic resources at a later date could be lower or higher than the amount recognized as a provision. The nature of estimates and judgments used differs for the various categories of provisions.

The recognition and measurement of provisions for legal disputes requires a high degree of judgment as to whether a current obligation exists and whether a future outflow of economic resources is probable and can be reliably estimated. We obtain assessments from in-house and external attorneys to assess these matters. Changes in circumstances may result in adjustments to provisions.

Income taxes

The tax expense comprises current and deferred taxes. Current and deferred taxes are recognized in profit or loss, except to the extent that they are associated with a business combination or with an item recognized directly in equity or other comprehensive income.

The Group has determined that interest and penalties on income taxes, including uncertain tax items, do not meet the definition of income taxes and are therefore accounted for in accordance with IAS 37.

a. Current taxes
Current taxes are the expected tax liability or tax receivable on the taxable income or loss for the fiscal year based on tax rates that are enacted or substantively enacted at the end of the reporting period, plus any adjustments to tax liability for previous years. The amount of the expected tax liability or tax receivable reflects the amount that is the best estimate, taking into account tax uncertainty, if any. Current tax liabilities also include all tax liabilities that arise as a result of dividends being determined. Current tax assets and liabilities are only netted under certain conditions.

b. Deferred taxes
Deferred taxes are recognized, in accordance with the asset and liability method, for all temporary differences at the end of the reporting period between the carrying amounts of assets and liabilities in the statement of financial position and their corresponding tax bases, and on the tax loss and for tax loss carryforwards. In accordance with IAS 12.15 in conjunction with IAS 12.21B, temporary differences arising on the initial recognition of goodwill are not included in the calculation of deferred taxes. Deferred taxes are calculated using currently enacted or substantially enacted tax rates that will apply when the temporary differences are expected to reverse. Deferred tax assets are recognized to the extent that it is probable that future taxable profits will be available against which the unused tax loss carryforwards or asset-side differences between the carrying amounts and the corresponding tax bases can be utilized.

Deferred tax assets and liabilities are only offset if they relate to income taxes levied by the same taxation authority and the entity has a legally enforceable right to offset the tax assets and liabilities.

Income taxes relating to items that are recognized directly in other comprehensive income are also recognized in other comprehensive income and not in profit or loss. Deferred taxes are recognized in other comprehensive income if the underlying transaction is also recognized in other comprehensive income.

Revenue recognition

Revenue includes sales of products (essentially industrial gases) and services as well as rental income, less trade discounts and rebates.

a. Revenue from on site plant and pipeline sales

Customers requiring large volumes of industrial gases (typically oxygen, nitrogen and hydrogen) and with a relatively constant demand are typically supplied by plants adjacent to or on their facilities, the capacity of which frequently also covers the liquid gas requirements of the surrounding market. These plants are legally owned and operated by the Messer Industries Group. The product supply contracts typically have terms of ten to 15 years and generally include agreements on minimum purchase volumes or minimum prices and price escalation clauses. Revenue is recognized when the gas is delivered to the customer, which is the date on which control of the industrial gases is transferred. If the customer does not take delivery of the minimum purchase requirements, revenue is generally recognized in the amount of the contractual minimum. The same conditions and accounting policies apply to sales via pipelines, with the sole difference that customers are supplied via a pipeline. Estimates are not required as of the end of the year as a result of regular billing.

Certain gas supply contracts, in particular those for the gas generation plants rented on a long-term basis, must be examined for the existence of a finance lease in accordance with IFRS 16 and, if necessary, classified as such. In the event of a finance lease in accordance with IFRS 16, disposal is assumed at the start of the lease term and revenue is recognized in the amount of the present value of the minimum lease payments attributable to the asset. Interest income earned on finance leases is reported as other financial income.

b. Revenue from liquefied gases

Liquid products are typically stored in the Group's own tanks, which are rented to customers on their premises. The gases are delivered to customers in tankers, tank trailers or rail cars from which the gases are transferred to the leased tanks. The agreements customary in liquefied products business typically have a term of two to three years. Revenue from liquefied products is recognized on delivery to the tank. Income from the rental of tanks is recognized according to the terms of the lease agreements in accordance with IFRS 16.

c. Revenue from cylinder gases

Customers who need small amounts of gas (especially for most special gases) receive the products in cylinders, which are typically owned by the Group and rented to customers. Cylinder gases are generally sold by individual purchase orders or by contracts, with terms ranging between one and two years. Revenue from gas sales is realized on delivery to the customer. Income from the rental of cylinders is recognized according to the terms of the lease agreements in accordance with IFRS 16.

d. Construction contracts

Depending on the type of contractual arrangement, revenue from long-term construction contracts in the Engineering division is recognized either at a point in time or over a period of time.
In accordance with IFRS 15, revenue from engineering projects is recognized over a period of time if they satisfy the criteria of IFRS 15.35. In the Messer Industries Group, this typically only applies to air separation units for specific customers. For other engineering projects that do not meet the criteria mentioned, revenue is recognized when the project is completed in accordance with IFRS 15.

3. Consolidated Companies

As of December 31, 2021, the group of consolidated companies is as follows:

2021	Germany	Foreign countries	Total
Consolidated	9	28	37
Equity method	–	4	4
Proportionately consolidated	–	2	2
As of Jan. 1	**9**	**34**	**43**
Additions			
of which acquisitions	–	–	–
Company foundation	1	–	1
Disposals			
of which disposals	–	–	–
As of Dec. 31	**10**	**34**	**44**
Consolidated	9	28	37
Equity method	1	4	5
Proportionately consolidated	–	2	2

Company foundation

HyDN GmbH, with registered office in Jülich, is a joint venture of Messer Industriegase GmbH and the three additional partners, Beteiligungsgesellschaft Kreis Düren mbH, RWE Generation SE and Siemens Project Ventures GmbH, each with an interest of 25 %. The purpose of the joint venture is a common hydrogen project in the area of mobility.
The company was founded on the basis of a notarial certificate dated December 1, 2021 and subsequent approval from RWE Generation SE on December 15, 2021. The share capital was paid on December 22, 2021 and registration in the commercial register took place on January 17, 2022. For this reason, as of the end of the reporting period, the company is recognized as "in foundation".

Notes to the Consolidated Income Statement

4. Revenue

	Jan. 1 – Dec. 31, 2021		Jan. 1 – Dec. 31, 2020	
From contracts with customers	1,876,380	89 %	1,730,889	88 %
From other revenue sources	242,330	11 %	234,603	12 %
Total	**2,118,710**	**100 %**	**1,965,492**	**100 %**

Revenue is mainly generated by the sale of liquefied products, cylinder gases and on site and pipeline sales. Revenue breaks down among the individual sales channels as follows:

	Jan. 1 – Dec. 31, 2021		Jan. 1 – Dec. 31, 2020	
Liquefied gases	1,241,056	59 %	1,065,835	54 %
Cylinder gases	303,221	14 %	351,697	18 %
Pipeline/on site	185,432	9 %	184,873	9 %
Hardware/other	146,671	7 %	128,484	7 %
From contracts with customers	**1,876,380**	**89 %**	**1,730,889**	**88 %**
From other revenue sources	242,330	11 %	234,603	12 %
Total	**2,118,710**	**100 %**	**1,965,492**	**100 %**

Revenue breaks down among the individual regions as follows:

	Jan. 1 – Dec. 31, 2021		Jan. 1 – Dec. 31, 2020	
North America	1,431,168	68 %	1,353,366	69 %
Western Europe	391,530	18 %	353,677	18 %
South America	296,012	14 %	258,449	13 %
Total	**2,118,710**	**100 %**	**1,965,492**	**100 %**

5. Cost of Sales

In addition to directly attributable costs, such as materials purchasing, energy and labor costs, cost of sales also includes overheads attributable to the production process, including depreciation on air separation units.

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Goods purchased	38,793	32,441
Production costs		
Energy	260,861	228,587
Depreciation	172,884	161,835
Personnel expenses	95,461	89,386
Maintenance	34,811	32,656
Taxes and other fees	15,872	18,320
Security and insurance	4,680	4,419
Others		
Raw materials and supplies	411,470	390,289
Hardware	3,483	5,532
Services	1,771	1,207
Other	33,907	36,396
Total	**1,073,993**	**1,001,068**

6. Selling and Distribution Expenses

Selling and distribution expenses also include the costs of all sales departments and logistics activities.

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Personnel expenses	222,413	212,680
Transportation costs	169,455	126,506
Depreciation	160,727	163,994
Maintenance	28,675	28,004
Warehousing costs	7,632	6,691
Insurance	3,174	2,958
Advertising	2,886	587
Other	32,600	47,194
Total	**627,562**	**588,614**

7. General and Administrative Expenses

General and administrative expenses include the personnel and non-personnel costs of management and administrative areas to the extent not recharged to other functions as an internal service.

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Personnel expenses	88,019	82,032
Depreciation and amortization	21,224	20,235
IT services	16,334	6,405
Insurance and audit services	12,619	10,042
Other	33,764	62,399
Total	**171,960**	**181,113**

8. Other Operating Income

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Exchange rate gains from operating activities	4,615	7,743
Gains on the disposal of non-current assets	1,191	7,605
Other prior-period income	1,159	4,065
Income from related parties	507	669
Insurance claims	118	491
Change in the fair value of derivatives through profit or loss	66	795
Miscellaneous	46,562	5,942
Total	**54,218**	**27,310**

In February 2021, the south-western states of the USA, particularly Texas, were impacted by extreme cold in the form of a polar vortex. The production facilities of Messer LLC, USA, located in Texas, operates in the deregulated market in the electric grid of the Electric Reliability Council of Texas ("ERCOT"). As a result of the extreme weather, energy prices rose to reach the administrative ceiling approved by ERCOT. Over a long period, Messer LLC, USA, then drastically throttled power consumption so as to limit demand for power grid operations as far as possible. The company had concluded derivative financial instruments for hedging future payments for energy purchases ("energy swaps"). On the basis of the conditions for these energy swaps, Messer LLC, USA, returned the excess energy to the supplier at the prevailing market price resulting in gains for the company of K€ 26,917 which are recognized in the "Miscellaneous" item.

9. Other Operating Expenses

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Exchange rate losses from operating activities	4,980	7,527
Related party expenses	3,306	2,778
Other taxes	2,779	4,140
Legal and consulting expenses	2,032	6,003
Losses on the disposal of non-current assets	1,535	253
Change in the fair value of derivatives through profit or loss	–	271
Miscellaneous	4,698	3,192
Total	**19,330**	**24,164**

10. Financial Result, Net

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Income from investments accounted for using the equity method	**228**	**58**
Other investment result, net	**131**	**(968)**
Finance income	**13,100**	**11,369**
Interest income from		
Bank balances	128	473
Other interest income	4,111	5,093
Foreign currency gains	7,206	5,595
Gain from the measurement of derivatives	4	–
Other finance income	1,651	208
Finance costs	**(92,437)**	**(136,041)**
Interest expense from		
Liabilities to banks	(62,536)	(83,418)
Leases	(4,932)	(5,175)
Expenses for the discounting of provisions	(2,092)	(5,104)
Capitalized borrowing costs	3,037	5,034
Other interest expenses	(1,961)	(2,719)
Foreign currency losses	(3,178)	(12,385)
Write-down on transaction costs	(17,825)	(11,094)
Loss from the measurement of derivatives	–	(169)
Other finance costs	(2,950)	(21,011)
Total	**(78,978)**	**(125,582)**

For more information on interest expenses for our bank financing and derivatives, please refer to note 27 “Financial liabilities” and note 32 “Other Financial Instrument Disclosures”.

11. Tax Result

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Current income taxes	(53,041)	(8,607)
Deferred income taxes	235	(8,332)
Total	**(52,806)**	**(16,939)**

Deferred income taxes related to items charged or credited directly to other comprehensive income:

	Dec. 31, 2021	Dec. 31, 2020
Deferred taxes related to gains or losses from the remeasurement of hedges	(9,784)	2,212
Deferred income taxes on net investments in foreign operations	(2,954)	(2,721)
Deferred taxes related to the remeasurement of net defined benefit obligations	(377)	2,743
Deferred tax assets / (liabilities) recognized in other comprehensive income	**(13,115)**	**2,234**

The following reconciliation summarizes the individual calculations of deferred taxes for specific companies using the respective tax rates specific to their countries, taking consolidation adjustments into account. The expected income tax is reconciled to the effective reported tax expense. To calculate the expected income tax, the income tax rate for the Group in fiscal 2021, based on the tax rate for the parent company of 30.00 % (previous year: 30.00 %), is multiplied by the profit before tax.

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Tax rate	30.00 %	30.00 %
Profit before tax	**200,184**	**69,400**
Expected income tax / (charge)	(60,055)	(20,820)
Impairment loss / non-recognition of deferred taxes on temporary differences	(5,489)	14,462
Impairment loss / non-recognition of deferred taxes on loss carryforwards	8,609	2,734
Effect of tax credits	574	143
Non-deductible withholding tax / other taxes	(9,278)	(8,125)
Effect of changes in tax rates	(1,029)	1,727
Associates accounted for using the equity method	(1)	(1)
Tax (expense) / income for previous years	1,544	(5,529)
Non-deductible expenses for tax purposes / tax-free income	(3,648)	(9,213)
Tax rate differences at Group companies	14,240	7,276
Others	1,727	407
Effective tax income / (expense) from operating activities	**(52,806)**	**(16,939)**
Effective tax rate	**26.38 %**	**24.41 %**

As of December 31, 2021, within the Messer Industries Group there were tax loss carryforwards of K€ 327,246 (previous year: K€ 430,598).

For Group companies that had losses in the current or the previous period, a deferred tax asset of K€ 107 (previous year: K€ 26) was capitalized, the realization of which is dependent on future taxable profits that are higher than the effects of the reversal of existing taxable temporary differences. The recognition of deferred tax assets is justified in that their realization is likely on the basis of planning for tax purposes.

Deferred taxes were not recognized for tax loss carryforwards of K€ 185,905 (previous year: K€ 201,270) or on temporary differences of K€ 972 (previous year: K€ 720), as it is assumed – on the basis of planning for tax purposes – that it will not be possible to utilize the tax loss carryforwards or temporary differences. The temporary differences of K€ 972 are considered vested.

The loss carryforwards of the Messer Industries Group without deferred tax assets will expire as follows:

Expiring within	Dec. 31, 2021
1 year	286
2 years	59
3 years	813
After 3 years	166,480
Indefinite	18,267
Total	**185,905**

In accordance with IAS 12.39, deferred taxes on the difference between the pro rata equity of a subsidiary recognized in the consolidated statement of financial position and the carrying amount of the investment in that subsidiary must be included in the parent company's tax accounts (outside basis differences) if they are expected to be realized. These differences essentially relate to the retained earnings of German and foreign subsidiaries. Deferred taxes are not recognized for these retained earnings as they are re-invested indefinitely or are not subject to corresponding taxation. Distributions by subsidiaries would be subject to dividend taxation. Distributions from abroad could also trigger withholding tax. As of December 31, 2021, deferred tax liabilities for outside basis differences were not taken into account for planned dividend payments as their realization is not planned.

Deferred taxes are attributable to the following statement of financial position items as of December 31, 2021:

	Dec. 31, 2021	Dec. 31, 2020	Recognized in profit or loss and other changes outside profit or loss*	Recognized in other comprehensive income
Deferred tax assets				
Tax loss carryforwards and tax credits	39,072	57,619	(18,547)	–
Intangible assets and property, plant and equipment	405	17,148	(16,743)	–
Inventories	792	861	(69)	–
Trade receivables	6,586	6,455	131	–
Other current receivables and other assets	–	346	(346)	–
Provisions for employee benefits	17,400	19,710	810	(3,120)
Other long-term provisions	16,275	15,413	862	–
Other short-term provisions	15,384	12,230	3,154	–
Other current liabilities	22,248	21,782	466	–
Miscellaneous	8,594	10,872	9,951	(12,229)
Total	**126,756**	**162,436**	**(20,331)**	**(15,349)**
Offsetting	**(106,187)**	**(145,527)**		
Deferred tax assets, net	**20,569**	**16,909**		
Deferred tax liabilities				
Intangible assets	(185,665)	(175,541)	(10,124)	–
Property, plant and equipment	(389,996)	(383,016)	(6,980)	–
Other non-current receivables and assets	(70)	(193)	123	–
Inventories	(15,136)	(19,536)	4,400	–
Other current receivables and assets	(15,518)	(1,401)	(14,117)	–
Non-current and current financial liabilities	(154)	(26)	(128)	–
Other short-term provisions	(2,858)	(3,016)	158	–
Miscellaneous	(7,543)	(28,817)	21,274	–
Total	**(616,940)**	**(611,546)**	**(5,394)**	–
Offsetting	**106,187**	**145,527**		
Deferred tax liabilities, net	**(510,753)**	**(466,019)**		
Total deferred taxes, net	**(490,184)**	**(449,110)**	**(25,725)**	**(15,349)**

* of which exchange rate changes recognized in other comprehensive income: K€ (25,960)

Deferred tax assets and liabilities, after offsetting at the individual companies, break down as follows:

Deferred taxes	**Dec. 31, 2021**	Dec. 31, 2020
Deferred tax assets	20,569	16,909
Deferred tax liabilities	(510,753)	(466,019)
Total deferred taxes, net	**(490,184)**	**(449,110)**

Deferred tax assets and liabilities in the statement of financial position and deferred taxes in the income statement are reconciled as follows:

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Change in deferred tax assets in the statement of financial position	3,660	10,586
Change in deferred tax liabilities in the statement of financial position	(44,734)	63,486
Difference	(41,074)	74,072
Of which:		
Through profit and loss	235	(8,332)
Offset against other comprehensive income	(15,349)	(1,002)
Exchange rate changes	(25,960)	83,406

12. Personnel Expenses

Personnel expenses consist of wages and salaries, social security contributions and other employee benefits (e.g. pensions).

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Personnel expenses	409,380	390,050

The above amount includes wages and salaries of K€ 314,176 (previous year: K€ 299,247), social security expenses of K€ 77,544 (previous year: K€ 74,207) and other personnel expenses of K€ 12,611 (previous year: K€ 11,686). Personnel expenses also comprise expenses for defined contribution plans of K€ 4,001 (previous year: K€ 3,683) and for defined benefit plans of K€ 1,048 (previous year: K€ 1,227).

13. Number of Employees (annual average)

The average number of employees breaks down as follows:

By region	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
North America	2,748	2,754
South America	2,168	2,209
Western Europe	802	802
Total number of employees	**5,718**	**5,765**

By function	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Production and filling	2,516	2,581
Logistics	1,480	1,463
Sales and marketing	968	974
Administration	594	600
Engineering	160	147
Total number of employees	**5,718**	**5,765**

Notes to the Consolidated Statement of Financial Position

14. Intangible Assets

2021	Goodwill	Right-of-use assets	Other intangible assets	Total
Cost				
As of Jan. 1, 2021	**566,429**	**107,929**	**1,147,668**	**1,822,026**
Additions	–	15,459	421	15,880
Reclassification	–	–	1,801	1,801
Disposals	–	(6,252)	(2,166)	(8,418)
Exchange rate changes	35,758	6,503	59,711	101,972
As of Dec. 31, 2021	**602,187**	**123,639**	**1,207,435**	**1,933,261**
Cumulative amortization				
As of Jan. 1, 2021	**–**	**(29,115)**	**(142,020)**	**(171,135)**
Additions	–	(18,205)	(80,743)	(98,948)
Reclassification	–	–	–	–
Disposals	–	5,931	29	5,960
Exchange rate changes	–	(1,812)	(9,063)	(10,875)
As of Dec. 31, 2021	**–**	**(43,201)**	**(231,797)**	**(274,998)**
Net carrying amounts as of Jan. 1, 2021	**566,429**	**78,814**	**1,005,648**	**1,650,891**
Net carrying amounts as of Dec. 31, 2021	**602,187**	**80,438**	**975,638**	**1,658,263**

2020	Goodwill	Right-of-use assets	Other intangible assets	Total
Cost				
As of Jan. 1, 2020	**655,901**	**97,835**	**1,231,097**	**1,984,833**
Additions	–	25,008	123	25,131
Reclassification	–	–	11,277	11,277
Disposals	–	(7,061)	(102)	(7,163)
Exchange rate changes	(89,472)	(7,853)	(94,727)	(192,052)
As of Dec. 31, 2020	**566,429**	**107,929**	**1,147,668**	**1,822,026**
Cumulative amortization				
As of Jan. 1, 2020	**–**	**(13,653)**	**(68,765)**	**(82,418)**
Additions	–	(19,504)	(81,521)	(101,025)
Reclassification	–	–	–	–
Disposals	–	2,261	11	2,272
Exchange rate changes	–	1,781	8,255	10,036
As of Dec. 31, 2020	**–**	**(29,115)**	**(142,020)**	**(171,135)**
Net carrying amounts as of Jan. 1, 2020	**655,901**	**84,182**	**1,162,332**	**1,902,415**
Net carrying amounts as of Dec. 31, 2020	**566,429**	**78,814**	**1,005,648**	**1,650,891**

Goodwill

Goodwill is tested for impairment as of December 31 each year. In accordance with IAS 36, goodwill is allocated to the smallest cash-generating unit for which goodwill is monitored and tested for impairment at this level by comparing discounted expected future cash flows against the carrying amount of that cash-generating unit. The smallest identifiable group of assets that generate cash inflows from continued use that are largely independent of the cash inflows of other assets or other groups of assets (cash-generating unit) were identified by the companies of the Messer Industries Group operating in the individual countries. If individual production and distribution companies within a country complement each other economically, they are combined into groups of cash-generating units for the purposes of goodwill monitoring. Accordingly, for Belgium, Brazil, Germany, Colombia (also combined with the business activities in Chile), the Netherlands, Spain and the US, various companies were combined in conjunction with impairment testing.

The following table shows the breakdown of goodwill as of December 31, 2021:

Cash-generating unit	Dec. 31, 2021	Dec. 31, 2020
USA	395,767	365,290
Canada	75,640	69,640
Germany	33,086	33,086
France	23,043	23,043
Switzerland	18,311	17,512
Colombia	17,215	18,882
Spain	13,879	13,879
Belgium	9,623	9,623
Brazil	8,716	8,629
Netherlands	3,649	3,649
Algeria	2,041	1,979
Portugal	1,217	1,217
	602,187	**566,429**

The recoverable amount for an individual operating company is based on calculations of its respective value in use. The value in use is the present value of the estimated future cash flows expected from the continuing operations of each company. The cash flow forecast is based on the most recent financial plans of the respective cash-generating unit that have been approved by management. Starting with the analysis of past results, values in use were calculated on the basis of detailed forecasts of long-term cash flows through 2025. Cash flows for periods after the detailed planning period were based on the final fiscal year of the detailed planning period (using the terminal value model). Forecast cash flows were discounted to their present value at the measurement date using an appropriate capitalization rate specific to that country. The capitalization rate is calculated using the capital asset pricing model (CAPM) after first being broken down into the components of basic interest rate, risk premium and growth discount. The risk-free basic interest rate was derived from yields on long-term government bonds taking into account the respective country rating (Moody's). The risk premium was obtained by multiplying the market risk premium by the beta factor that reflects the relative risk of a given stock compared to the market as a whole. The market risk premium was calculated for each country using the Damodaran model, taking into account the respective country rating (Moody's). The beta factor was calculated on the basis of an analysis of a peer group of listed companies for the Messer Industries Group.

The capitalization rates for the specific countries are as follows:

	Dec. 31, 2021	Dec. 31, 2020
Brazil	8.54 %	9.79 %
Algeria	7.70 %	8.71 %
Portugal	7.16 %	8.33 %
Colombia	7.47 %	8.23 %
Spain	6.86 %	7.48 %
Belgium	5.92 %	6.11 %
France	5.82 %	5.96 %
Canada	5.62 %	5.55 %
USA	5.61 %	5.54 %
Switzerland	5.37 %	5.31 %
Netherlands	5.35 %	5.29 %
Germany	5.34 %	5.28 %

The detailed forecasts up to 2025 used to calculate the values in use of the cash-generating units are based, among other things, on the assumptions for revenue growth, the development of the EBITDA margin and the long-term growth rate after the detailed planning period. These assumptions for the cash-generating units are as follows:

Cash-generating unit	Carrying amount		Significant planning assumptions		
	Dec. 31, 2021		Revenue growth (CAGR)	Trend in EBITDA margin[1]	Growth rate[2]
USA	395,767	66 %	Moderate increase	Stable	1,5 %
Canada	75,640	13 %	Slight increase	Stable	1,5 %
Germany	33,086	5 %	Moderate increase	Strong increase	1,0 %
France	23,043	4 %	Moderate increase	Slight increase	1,0 %
Switzerland	18,311	3 %	Moderate increase	Strong decrease	1,0 %
Colombia	17,215	3 %	Moderate increase	Strong increase	2,0 %
Spain	13,879	2 %	Moderate increase	Strong increase	1,0 %
Belgium	9,623	2 %	Slight increase	Slight decrease	1,0 %
Brazil	8,716	1 %	Moderate increase	Strong increase	2,0 %
Netherlands	3,649	1 %	Slight increase	Moderate increase	1,0 %
Algeria	2,041	0 %	Moderate increase	Moderate increase	1,0 %
Portugal	1,217	0 %	Moderate increase	Strong increase	1,0 %
Messer Industries Group	**602,187**	**100 %**			

[1] End of the detailed planning period compared to the current fiscal year
[2] Growth after the detailed planning period

The weighted average growth rate for extrapolating cash flows beyond the planning period is 1.0 % for all Western European units (previous year: 1.0 %). The average growth rate for the American units its between 1.5 % and 2.0 % (previous year: between 1.25 % and 3.0 %).

The following three scenarios were simulated in conjunction with a sensitivity analysis:

(a) Increase in the capitalization rates for each country by 1 percentage point.
(b) The long-term growth rate after the detailed planning period is reduced by 0.5 %.
(c) Planned EBIT of the cash-generating units consistently falls short of forecasts by 10 % throughout the entire planning period and thereafter from fiscal 2025 onwards.

In none of these scenarios would there be any goodwill impairment requirements at the cash-generating units, except for Spain. As of December 31, 2021, the recoverable amount for Spain exceeded the carrying amount by K€ 7,682.

The changes in the main assumptions which result in the recoverable amount for Spain corresponding to the carrying amount are shown below:

Cash-generating unit	Sensitivity scenarios (Change in percentage points)		
	Capitalization rate	Growth rate	EBIT below forecast[1]
Spain	+0.29 %	-0.38 %	-6.5 %

[1] Throughout the forecast period

Right-of-use assets

Right-of-use assets relate to assets capitalized in conjunction with leases in accordance with IFRS 16. These consist of the following:

2021	Land and buildings	Plant and machinery	Other operating and office equipment	Total
Cost				
As of Jan. 1, 2021	**63,976**	**43,523**	**430**	**107,929**
Additions	8,353	7,092	14	15,459
Disposals	(1,975)	(3,932)	(345)	(6,252)
Exchange rate changes	4,260	2,230	13	6,503
As of Dec. 31, 2021	**74,614**	**48,913**	**112**	**123,639**
Cumulative amortization				
As of Jan. 1, 2021	**(15,550)**	**(13,277)**	**(288)**	**(29,115)**
Additions	(8,371)	(9,729)	(105)	(18,205)
Disposals	1,909	3,687	335	5,931
Exchange rate changes	(1,182)	(619)	(11)	(1,812)
As of Dec. 31, 2021	**(23,194)**	**(19,938)**	**(69)**	**(43,201)**
Net carrying amounts as of Jan. 1, 2021	**48,426**	**30,246**	**142**	**78,814**
Net carrying amounts as of Dec. 31, 2021	**51,420**	**28,975**	**43**	**80,438**

2020	Land and buildings	Plant and machinery	Other operating and office equipment	Total
Cost				
As of Jan. 1, 2020	**69,492**	**27,928**	**415**	**97,835**
Additions	3,467	21,466	75	25,008
Disposals	(3,695)	(3,335)	(31)	(7,061)
Exchange rate changes	(5,288)	(2,536)	(29)	(7,853)
As of Dec. 31, 2020	**63,976**	**43,523**	**430**	**107,929**
Cumulative amortization				
As of Jan. 1, 2020	**(7,034)**	**(6,473)**	**(146)**	**(13,653)**
Additions	(10,292)	(9,050)	(162)	(19,504)
Disposals	698	1,554	9	2,261
Exchange rate changes	1,078	692	11	1,781
As of Dec. 31, 2020	**(15,550)**	**(13,277)**	**(288)**	**(29,115)**
Net carrying amounts as of Jan. 1, 2020	**62,458**	**21,455**	**269**	**84,182**
Net carrying amounts as of Dec. 31, 2020	**48,426**	**30,246**	**142**	**78,814**

Interest expenses of K€ 4,932 (previous year: K€ 5,175) were recognized in connection with leases. Furthermore, the following expenses were recognized that were not taken into account in the measurement of right-of-use assets and the corresponding liability:

	2021	2020
Expenses for leases for low-value assets	–	–
Expenses for short-term leases	2,735	2,487
Expenses for variable lease payments	–	–
	2,735	**2,487**

In total, leases resulted in cash outflows of K€ 25,310 (previous year: K€ 21,917) in the year under review.

Other intangible assets

Other intangible assets essentially consist of customer bases, technologies/patents and licenses, the net carrying amounts of which were K€ 671,473 (previous year: K€ 673,068), K€ 136,021 (previous year: K€ 139,046) and K€ 101,420 (previous year: K€ 115,592) as of December 31, 2021, and other intangible assets.

The customer bases result from purchase price allocation performed as of March 1, 2019 and will be amortized on a straight-line basis over a period of up to 45 years after December 31, 2021. The useful life of the customer bases is not more than 47.5 years and is higher than the original maximum contract term of 15 years as the respective renewal options are highly likely to be exercised by customers. The amortization expense for the fiscal year is recognized in selling and distribution expenses.

"Technologies" mainly includes patents in the segments of software, oil and gas, energy, food and healthcare, which were acquired from the Linde Group. As of December 31, 2021, the net carrying amounts of the patents are K€ 119,203 (previous year: K€ 120,751) in the US, K€ 6,761 (previous year: K€ 8,025) in Colombia, K€ 6,744 (previous year: K€ 6,720) in Canada and K€ 3,313 (previous year: K€ 3,550) in Brazil.

The licenses include the rights to the brands ‚Messer – Gases for Life' (K€ 99,946, previous year: K€ 113,892) and ‚REMEO' (K€ 1,474, previous year: K€ 1,700) that are amortized over their useful life of ten years.

15. Property, Plant and Equipment

2021	Land and buildings	Plant and machinery	Other operating and office equipment	Construction in progress	Total
Cost					
As of Jan. 1, 2021	**189,153**	**1,884,571**	**228,368**	**130,845**	**2,432,937**
Additions	802	31,866	2,183	265,695	300,546
Reclassification	2,175	177,778	27,200	(208,954)	(1,801)
Disposals	(583)	(19,293)	(3,831)	(50)	(23,757)
Exchange rate changes	6,698	104,533	14,710	9,419	135,360
As of Dec. 31, 2021	**198,245**	**2,179,455**	**268,630**	**196,955**	**2,843,285**
Cumulative amortization					
As of Jan. 1, 2021	**(12,857)**	**(335,625)**	**(66,619)**	**–**	**(415,101)**
Additions	(7,068)	(213,729)	(34,347)	(745)	(255,889)
Reclassification	1	843	(844)	–	–
Disposals	90	17,605	2,784	–	20,479
Exchange rate changes	(303)	(23,526)	(4,519)	(35)	(28,383)
As of Dec. 31, 2021	**(20,137)**	**(554,432)**	**(103,545)**	**(780)**	**(678,894)**
Net carrying amounts as of Jan. 1, 2021	**176,296**	**1,548,946**	**161,749**	**130,845**	**2,017,836**
Net carrying amounts as of Dec. 31, 2021	**178,108**	**1,625,023**	**165,085**	**196,175**	**2,164,391**

2020	Land and buildings	Plant and machinery	Other operating and office equipment	Construction in progress	Total
Cost					
As of Jan. 1, 2020	**207,781**	**1,743,298**	**191,871**	**284,706**	**2,427,656**
Additions	300	24,042	1,262	224,175	249,779
Reclassification	1,377	290,912	58,405	(361,971)	(11,277)
Disposals	(2,571)	(9,939)	(1,926)	(730)	(15,166)
Exchange rate changes	(17,734)	(163,742)	(21,244)	(15,335)	(218,055)
As of Dec. 31, 2020	**189,153**	**1,884,571**	**228,368**	**130,845**	**2,432,937**
Cumulative amortization					
As of Jan. 1, 2020	**(5,889)**	**(164,667)**	**(33,737)**	**–**	**(204,293)**
Additions	(7,502)	(198,558)	(39,127)	–	(245,187)
Reclassification	4	(83)	79	–	–
Disposals	120	5,897	1,147	–	7,164
Exchange rate changes	410	21,786	5,019	–	27,215
As of Dec. 31, 2020	**(12,857)**	**(335,625)**	**(66,619)**	**–**	**(415,101)**
Net carrying amounts as of Jan. 1, 2020	**201,892**	**1,578,631**	**158,134**	**284,706**	**2,223,363**
Net carrying amounts as of Dec. 31, 2020	**176,296**	**1,548,946**	**161,749**	**130,845**	**2,017,836**

Borrowing costs of K€ 3,037 (previous year: K€ 5,034) were capitalized for qualifying assets in the fiscal year. The average interest rate was 2.9 % (previous year: 3.2 %).

Impairment on property, plant and equipment in the USA of K€ 3,030 was recognized in fiscal 2021. This is included in the additions to depreciation on “Plant and machinery” and “Construction in progress” for the fiscal year. The impairment loss is reported under “Cost of sales” in the income statement.

Additions to plant and machinery include a net amount of K€ 4,000 thousand (previous year: K€ 3,588) that was capitalized in accordance with IFRIC 1 on the basis of measurement changes in restoration obligations.

16. Interests in Other Entities

Investments accounted for using the equity method

The following interests in associates were recognized on the basis of the interest in the equity of the relevant entity as of December 31, 2021:

Name and registered office of the entity	Share owned (%)		Carrying amount	
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2020
Non-significant companies				
Limes S.A.S., Saint-Herblain	50 %	50 %	3,722	3,723
Cliffside Refiners LP, Delaware	26 %	26 %	1,488	1,392
GreenCO2 N.V., Zwijndrecht	35 %	35 %	520	518
Cliffside Helium LLC, Delaware	26 %	26 %	56	47
HyDN GmbH, Jülich (in foundation)	25 %	–	6	–
			5,792	**5,680**

Interests in associates developed as follows:

	2021	2020
Cost		
As of Jan. 1	**5,680**	**5,894**
Group’s share of results/additions	233	228
Dividends/disposals	(240)	(306)
Exchange rate changes	119	(136)
As of Dec. 31	**5,792**	**5,680**
Cumulative amortization		
As of Jan. 1	**–**	**–**
Additions	–	–
As of Dec. 31	**–**	**–**
Net carrying amount as of Jan. 1	**5,680**	**5,894**
Net carrying amount as of Dec. 31	**5,792**	**5,680**

The following table shows the summarized pro rata financial data of the individually immaterial associates: Limes S.A.S., France, is a 50 % investment of Messer France S.A.S., France. BECO2 B.V.B.A., Belgium, has a 50 % interest in GreenCO2 N.V., Belgium. Messer LLC, USA, holds 26 % in Cliffside Refiners LP, USA, and 26 % in Cliffside Helium LLC, USA. In HyDN GmbH, which is in foundation as of the end of the reporting period, Messer Industriegase GmbH holds a 25 % interest.

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Net profit for the year	223	227
Other comprehensive income	41	(61)
Total comprehensive income	**263**	**166**

Joint operations

Messer LLC, USA, holds a 50 % interest in joint arrangements named East Coast Nitrogen Company LLC, Delaware, USA, and East Coast Oxygen Company LLC, Delaware, USA, which were formed as partnerships with Air Products, USA, to produce liquid nitrogen, oxygen and argon for selected partners of the joint arrangement.

The associated assets and liabilities, income and expenses from joint operations are included in the consolidated financial statements according to the economically attributable share.

The following table shows the summarized pro rata financial data of the individually immaterial joint arrangements:

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Net profit for the year	(3,150)	(3,183)
Other comprehensive income	2,565	(2,781)
Total comprehensive income	**(586)**	**(5,964)**

17. Equity Investments

"Equity Investments" comprises equity investments in the companies Lida S.A.S., France, and Soprogaz S.N.C., France, which are neither consolidated nor accounted for using the equity method.

18. Other Financial Investments

Other financial investments are investment securities; information on their measurement can be found under note 32 "Other Financial Instrument Disclosures".

19. Other Non-Current Receivables and Assets

	Dec. 31, 2021	Dec. 31, 2020
Trade receivables	91	10
Other receivables	28,322	25,365
Financial assets	**28,413**	**25,375**
Prepaid expenses	1,906	1,959
Non-financial assets	**1,906**	**1,959**
Total	**30,319**	**27,334**

20. Inventories

	Dec. 31, 2021	Dec. 31, 2020
Raw materials and supplies	28,014	24,018
Work in progress	17,628	6,166
Finished goods and goods for resale	127,536	126,177
Total	**173,178**	**156,361**

K€ 19,918 (previous year: K€ 17,772) of the inventories recognized on December 31, 2021 were measured at their net realizable value. There are impairment losses of K€ 16,088 (previous year: K€ 14,150) on the net realizable value. The impairment losses were recognized in the cost of sales. The amount of inventories recognized as an expense in the reporting period is K€ 519,751 (previous year: K€ 446,330).

21. Trade Receivables

	Dec. 31, 2021	Dec. 31, 2020
Trade receivables	319,597	292,220
Write-downs on receivables	(36,308)	(35,428)
Total	**283,289**	**256,792**

Please refer to the comments under note 32 “Other Financial Instrument Disclosures” regarding write-downs on receivables.

22. Contract Balances

All work related to engineering contracts was billed in fiscal 2021 and 2020 and the corresponding amounts were reported in trade receivables.

Performance obligations from contracts with customers

The following table shows the Group's performance obligations from long-term gas supply contracts with customers:

	Dec. 31, 2021	Dec. 31, 2020
Due in 1st year	242,474	230,046
Due in 2nd year	239,738	228,203
Due in 3rd year	237,779	224,812
Due after more than 3 years	1,265,621	1,269,298
Total	**1,985,612**	**1,952,359**

The amounts shown above essentially relate to contractually agreed fixed payments, known as take-or-pay installments. Variable obligations were not taken into account. Revenue is recognized on delivery of the gases.

23. Other Current Financial and Non-Financial Assets

	Dec. 31, 2021	Dec. 31, 2020
Derivative financial instruments in hedges	45,667	3,686
Other receivables from operating activities	17,752	14,294
Receivables from related parties	6,654	5,365
Derivative financial instruments not in hedges	935	–
Deposits and guarantees	722	416
Receivables from employees	29	112
Miscellaneous	97,788	561
Financial assets	**169,547**	**24,434**
Other tax receivables	43,098	36,427
Deferred expenses	8,053	6,276
Deferred expenses to related companies	138	–
Prepayments	57	79
Miscellaneous	1	6
Non-financial assets	**51,347**	**42,788**
Total	**220,894**	**67,222**

Derivative financial instruments with an effective hedge include the positive fair values of energy swaps, interest derivatives and currency forwards.

For more information on "Miscellaneous" under financial assets please refer to note "31 Contingent Liabilities".

24. Cash and Cash Equivalents

	Dec. 31, 2021	Dec. 31, 2020
Cash, bank balances and checks	274,917	410,807
Cash equivalents	–	–
Cash and cash equivalents	**274,917**	**410,807**

As of December 31, 2021, the Group had cash and cash equivalents of K€ 274,917 (previous year: K€ 410,807). As far as possible, cash and cash equivalents are invested at banks and fi-nancial institutions with an investment grade rating or better. The ratings are based on a rating from Standard & Poor's or another rating from a comparable respected rating agency.

Based on the external ratings for the banks and financial institutes, it is assumed that there is a low default risk.

As of December 31, 2021, the valuation allowance is K€ 0 (previous year: K€ 0).

25. Provisions for Employee Benefits

	Dec. 31, 2021	Dec. 31, 2020
Pension provisions	35,296	46,657
Provisions for other employee benefits	570	505
Provisions for employee benefits	**35,866**	**47,162**

Pension benefits are provided to employees in a number of countries through both defined benefit and defined contribution pension plans. The benefits vary according to legal, fiscal and economic circumstances of each country. Plan benefits are based on years of service and the level of employee compensation. Provisions for other employee benefits mainly relate to company or statutory severance benefits and early retirement benefits. Some of the obligations under defined benefit pension plans are covered by plan assets held in independent trust funds. The net assets of these funds are predominantly invested equity instruments, bonds and qualified insurance policies.

The amount recognized in the statement of financial position is derived as follows:

	Dec. 31, 2021	Dec. 31, 2020
Present value of funded pension benefits	119,145	120,835
Present value of pension benefits funded by provisions	13,007	16,467
Present value of all pension benefits	**132,152**	**137,302**
Fair value of plan assets of all funds	(96,856)	(90,645)
Net liability recognized	**35,296**	**46,657**

The present value of the funded pension commitments predominantly relates to pension plans of Messer Canada Inc. in the amount of K€ 82,124 (previous year: K€ 84,167).

Messer Canada Inc. operates a funded pension plan that grants members benefits in the form of a guaranteed lifetime pension. The amount of this pension is based on average income and is linked to age and length of service. In Canada, the defined benefit component of the plan has been closed to new entrants since January 1, 2005. Newcomers join a defined contribution plan. In the defined benefit pension plan, future service recognition was discontinued for the remaining employees, with final recognition ending on June 30, 2021.

The Canadian pension plan is managed by a pension committee and its assets are held in a pension fund that is legally independent of the company. The assets cannot be used for any purpose other than the payment of pension benefits and related administrative fees.

The minimum funding requirements in Canada require the company to make special payments to amortize any shortfalls in plan assets in relation to the relevant funding objectives. Instead of these special payments, collateral in the form of letters of credit up to a maximum of 15 % of the actuarial liability used to determine the funding objective is permitted. The company does not currently use any letters of credit.

In accordance with Canadian law, any remainder after accrued benefits have been provided to plan members and after the plan has ended may be returned to the company. Pension legislation in Canada may require the company to make a proposal to members and beneficiaries regarding the allocation of excess assets. Part of this surplus can be used by the company to reduce future contributions or to pay refundable administrative expenses.

The company also offers a limited number of active employees and retirees employer-paid life insurance and post-retirement health plans. The post-retirement benefit plan is not funded.

Defined benefit plans expose the Group to various risks. In addition to general actuarial risks such as longevity risk and interest rate risk, the Group is exposed to currency risk and capital market/investment risk. The risk exposures from the respective plans are not materially different.

The following table shows the reconciliation of the funding of defined benefit plans to the amounts recognized in the consolidated financial statements as of December 31, 2021 and 2020:

	Dec. 31, 2021		Dec. 31, 2020	
	Pension commitments funded by provisions	Pension commitments funded by funds	Pension commitments funded by provisions	Pension commitments funded by funds
Change in the present value of the defined benefit pension plans				
Present value of all pension benefits as of Jan. 1	**16,467**	**120,835**	**20,142**	**131,142**
Change in Group reporting	–	–	–	–
Current service cost	294	1,309	266	1,394
Past service cost	(1,097)	–	–	–
Interest expense on obligations	780	2,274	873	2,558
Employee contributions	–	512	–	503
Actuarial losses (gains)	(2,793)	(5,871)	(125)	7,194
Pension payments	(750)	(8,090)	(652)	(7,145)
Others	(84)	–	–	(9,041)
Exchange rate changes	190	8,176	(4,037)	(5,770)
Present value of all pension benefits as of Dec. 31	**13,007**	**119,145**	**16,467**	**120,835**
Change in plan assets of all funds				
Fair value of plan assets of all funds as of Jan. 1	**–**	**90,645**	**–**	**102,083**
Change in Group reporting	–	–	–	–
Interest income/(losses)	–	1,793	–	2,057
Income/(losses) (not including interest income)	–	2,711	–	3,562
Contributions paid in – employer	–	2,726	–	2,151
Contributions paid in – employees	–	513	–	503
Pension payments	–	(8,090)	–	(7,145)
Unrecognized excess of plan assets	–	–	–	–
Others	–	(8)	–	(7,884)
Exchange rate changes	–	6,566	–	(4,682)
Fair value of plan assets of all funds as of Dec. 31	**–**	**96,856**	**–**	**90,645**

In the previous year, the "Others" item under pension benefits related to adjustments in the funded pension plan caused by lowering the conversion rate for standard pension age at Messer Schweiz AG, Switzerland. The applicable conversion rate is used to convert the pension credit available as of the pension date into a pension. As a result of the change, the Group's obligation was reduced by K€ 1,165, which was recognized in profit or loss.
The "Others" item also showed the disposal of pension benefits and plan assets for Messer B.V., Netherlands, in the same amount. This disposal was recognized in other comprehensive income.

The fair value of plan assets breaks down among the individual asset classes as follows. The amounts shown are weighted averages:

	Dec. 31, 2021 Fair value		quoted on an active market	not quoted on an active market	Dec. 31, 2020 Fair value		quoted on an active market	not quoted on an active market
Equity instruments/funds	47,051	48%	5,803	41,248	39,179	44%	5,128	34,051
Bonds	36,047	37%	5,833	30,214	37,321	41%	4,806	32,515
Qualifying insurance policies	6,818	7%	–	6,818	6,326	7%	–	6,326
Real estate	3,587	4%	1,230	2,357	3,851	4%	1,317	2,534
Other assets	2,479	3%	1,366	1,113	2,881	3%	1,580	1,301
Cash funds	874	1%	874	–	1,087	1%	1,087	–
Total	**96,856**	**100%**	**15,106**	**81,750**	**90,645**	**100%**	**13,918**	**76,727**

Plan assets are held exclusively to fulfill defined benefit obligations. The funding of these obligations constitutes a reserve for future cash outflows. This is based on statutory regulations in some countries and is voluntary in others. Given the diversity of pension benefits within the Group, the interest rate is not hedged using financial instruments. Following guidelines stipulated by local management, the bodies responsible for the various pension funds decide on the best possible investment strategy commensurate with the age of beneficiaries and the timing of future payments, in accordance with applicable legislation. Most of the plans are not intended to maximize profit, but rather to ensure optimal provision for the companies and employees concerned. Funds held to pay future benefits are invested responsibly.

Actuarial losses/(gains) arising on the remeasurement of the present value of pension benefits comprise the following:

	Jan. 1 – Dec. 31, 2021		Jan. 1 – Dec. 31, 2020	
	Pension commitments funded by provisions	Pension commitments funded by funds	Pension commitments funded by provisions	Pension commitments funded by funds
Experience adjustments	(1,629)	292	587	217
Change in financial assumptions	(1,164)	(5,014)	(712)	6,977
Change in demographic assumptions	–	(1,149)	–	–
Actuarial losses/(gains) arising on the remeasurement of the present value of pension benefits	**(2,793)**	**(5,871)**	**(125)**	**7,194**

The following items were recognized in profit or loss in the reporting period:

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Current service cost	1,603	1,660
Past service cost	(1,097)	–
Interest expense on obligations	3,054	3,431
Expected return on plan assets	(1,793)	(2,057)
Others	(84)	–
Total amounts recognized in profit and loss	**1,683**	**3,034**

The calculation of obligations and, in certain cases, the related plan assets is based on the following actuarial parameters (reported as a weighted average):

	Dec. 31, 2021 in percent	Dec. 31, 2020 in percent
Discount rate	2.43	2.19
Expected rate of salary increases	1.97	1.63
Expected return on plan assets	0.52	0.50
Expected rate of pension increases	0.78	0.82

The CPM 2014 tables were used to measure pension obligations in Canada. The pension obligation in Switzerland was measured using the BVG 2020 GT mortality tables. Mortality tables specific to each company were used to measure the pension obligations for other Group companies.

The present value of the defined benefit obligation relates to the following groups of beneficiaries:

	Dec. 31, 2021		Dec. 31, 2020	
Active beneficiaries	88,661	67 %	90,420	66 %
Beneficiaries who have left the company	11,522	9 %	11,657	8 %
Retired employees	31,969	24 %	35,225	26 %
Total	**132,152**	**100 %**	**137,302**	**100 %**

The weighted average term of the defined benefit obligation as of December 31, 2021 is 13.2 years (previous year: 14.7 years).

An increase or decrease in the discount rate by 50 basis points would have the following effect on the present value of pension obligations as of December 31, 2021:

Change in discount rate in basis points	**- 50**	**-/+ 0**	**+ 50**
Present value of all pension benefits	143,626	132,152	122,935

The sensitivity calculations are based on the average term of the pension obligations calculated as of December 31, 2021. The calculation was made for the discount rate, the actuarial parameter classified as material. As the sensitivity analysis is based on the average duration of the expected pension obligations and therefore the expected payment dates are not taken into account, it only produces approximate information or trend statements.

The Group anticipates contributions to the defined benefit plans of K€ 4,168 (previous year: K€ 4,089) in 2022.

26. Other Provisions

	Jan, 1, 2021	Addition	Utilization	Unused amounts reversed	Currency translation	**Dec. 31, 2021**
Long-term						
Restoration obligations	29,761	5,855	(84)	–	2,749	38,281
Environmental risks	15,348	266	(219)	–	1,283	16,678
Litigation	12,021	1,574	(742)	(1,523)	37	11,367
Personnel	3,075	2,163	(2,731)	(7)	153	2,653
Miscellaneous	727	126	(410)	(144)	–	299
Total	**60,932**	**9,984**	**(4,186)**	**(1,674)**	**4,222**	**69,278**
Current						
Litigation	2,365	94,253	(985)	(39)	4,449	100,043
Personnel	10,622	7,670	(5,137)	(417)	431	13,169
Environmental risks	6,199	2,727	(2,648)	–	521	6,799
Restoration obligations	4,648	1,280	(989)	–	409	5,348
Miscellaneous	2,698	5,484	(1,680)	(384)	(5)	6,113
Total	**26,532**	**111,414**	**(11,439)**	**(840)**	**5,805**	**131,472**

Contracts for which provisions have been recognized essentially have a broad range of remaining terms of between one and ten years.

The provisions for contractually agreed restoration obligations for existing plants essentially relate to Messer LLC, USA. Messer North America Inc., USA, accounted for a significant portion of the provisions for environmental risks, which were recognized for long-term plant cleaning obligations.

The provisions for litigation essentially relate to the areas of antitrust, HR and civil litigation. For more information on two provisions for litigation risks in the USA and Spain, please refer to note 31 “Contingent Liabilities”.

Personnel provisions as of December 31, 2021 predominantly relate to bonus payments and outstanding vacation.

The discounting of long-term provisions amounts to K€ 831 (previous year: K€ 3,771).

27. Financial Liabilities

On March 1, 2019, Messer Industries GmbH and Messer Industries USA, Inc., USA, (as the borrower) and Yeti GermanCo 3 GmbH (as another party), signed a loan agreement with a banking group led by CITIBANK NA, UK. The loan agreement serves to partially finance the purchase price payment for the Linde AG and Praxair business acquired in North and South America in 2019 and to finance ongoing business operations.

The credit agreement contains three facilities:

- “Facility B-1” of USD 2,225 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries USA, Inc., USA. The loan will be repaid quarterly at 0.25 % of the original amount, starting on June 28, 2019. There were unscheduled redemptions amounting to USD 290 million on March 31, 2021, June 30, 2021 and September 30, 2021. The balance will be repaid in full on March 1, 2026. The margin is 2.5 % p.a. or 1.5 % p.a. depending on the underlying refinancing base of the banks. As of December 31, 2021, the margin is 2.5 % p.a.

- “Facility B-2” of € 540 million, a long-term, fully utilized loan with a term of seven years. The borrower is Messer Industries GmbH. There were unscheduled redemptions amounting to EUR 150 million on March 31, 2021 and September 30, 2021. The remaining amount of the loan is due on March 1, 2026. The margin was initially 2.75 % p.a., until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2021, the margin is 2.5 % p.a.

- “Revolving facility” of USD 450 million: The borrowers are Messer Industries GmbH and Messer Industries USA, Inc., Delaware, and any other company that secures the loan agreement as a guarantor. The facility can be used to finance working capital and for all general financing requirements of the company on a revolving basis. There is no need to reduce the loan to zero at any time during its term. It is available until March 1, 2024. The margin was 1.75 % p.a. or 0.75 % p.a., depending on the underlying refinancing base of the banks, until August 28, 2019, since when it has been subject to an adjustment mechanism based on the development of the ratio of senior net debt to consolidated EBITDA. As of December 31, 2021, the revolving facility was used only for guarantees. The margin here is 0.75 % p.a.

Guarantees provided by individual Group companies serve as collateral for the full amount of the financing arrangements:.
Messer Industries GmbH, Messer Industries USA Inc., USA, Messer LLC, USA, Messer France S.A.S., France, Messer Canada Inc., Canada, and Messer Gases Ltda., Brazil.

Shares in the following companies have been pledged to the banks:
Messer Industries GmbH, Messer Industries USA, Inc., USA, Messer Gases Ltda., Brazil, and Messer France S.A.S., France.

The assets of the following companies have been pledged to the banks:
Messer Industries USA, Inc., USA, Messer Canada Inc., Canada, and Messer LLC, USA. The carrying amount of the companies' property, plant and equipment is K€ 1,345,554.

The bank accounts of the following companies have been pledged to the banks:
Messer Industries GmbH, Messer Gases Ltda., Brazil, Messer France S.A.S., France and Yeti GermanCo 3 GmbH with a total carrying amount of K€ 112,100.

The receivables of the following companies have been pledged to the banks:
Messer Gases Ltda., Brazil, and the intercompany receivables of Yeti GermanCo 3 GmbH, Messer Industries GmbH and Messer France S.A.S., France. The carrying amount of the pledged receivables is K€ 47,699. Intercompany receivables with a nominal value of K€ 72,224 have also been pledged. The unutilized credit facilities amount to € 322 million as of December 31, 2021 (previous year: € 290 million).

The loan balances and maturities are as follows as of December 31, 2021:

2021	Interest rate p.a.	Credit facility	Utilization	Due date
USD 2,225.0 million, facility B-1	2.72 %	1,654,435	1,654,435	March 1, 2026
€ 540.0 million, facility B-2	2.50 %	390,000	390,000	March 1, 2026
USD 263.1 million, revolving facility	0.00 %	232,297	–	March 1, 2024
USD 13.0 million, RFA ancillary facility[1]	0.00 %	1,063	–	March 1, 2024
USD 45.0 million, RFA ancillary facility[2]	0.00 %	31,917	–	March 1, 2024
USD 44.0 million, RFA ancillary facility[3]	0.00 %	18,593	–	March 1, 2024
USD 39.9 million, RFA ancillary facility[4]	0.00 %	11,926	–	March 1, 2024
USD 45.0 million, RFA ancillary facility[5]	0.00 %	26,046	–	March 1, 2024
Other local loans[6]	2.98 %	3,481	3,481	Various
Lease liabilities[6]	5.91 %	n/a	88,867	Various
		2,369,758	**2,136,783**	
Transaction costs			(39,345)	
			2,097,438	

[1] K€ 10,415 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2021.
[2] K€ 7,815 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2021.
[3] K€ 20,255 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2021.
[4] K€ 23,303 was utilized as a guarantee to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2021.
[5] K€ 13,685 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2021.
[6] Weighted interest rate as of December 31, 2021, foreign currencies were translated using the rate as of December 31, 2021.

The loan balances and maturities are as follows as of December 31, 2020:

2020	Interest rate p.a.	Credit facility	Utilization	Due date
USD 2,225.0 million, facility B-1	2.75 %	1,781,487	1,781,487	March 1, 2026
€ 540.0 million, facility B-2	2.50 %	540,000	540,000	March 1, 2026
USD 263.1 million, revolving facility	0.00 %	214,408	–	March 1, 2024
USD 13.0 million, RFA ancillary facility[1]	0.00 %	1,096	–	March 1, 2024
USD 45.0 million, RFA ancillary facility[2]	0.00 %	29,185	–	March 1, 2024
USD 44.0 million, RFA ancillary facility[3]	0.00 %	18,623	–	March 1, 2024
USD 39.9 million, RFA ancillary facility[4]	0.00 %	3,034	–	March 1, 2024
USD 45.0 million, RFA ancillary facility[5]	0.00 %	24,040	–	March 1, 2024
Other local loans[6]	3.02 %	3,845	3,845	Various
Lease liabilities[6]	5.82 %	n/a	86,098	Various
		2,615,718	**2,411,430**	
Transaction costs			(54,314)	
			2,357,116	

[1] K€ 9,498 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2020.
[2] K€ 7,486 was utilized as a guarantee for delivery and performance obligations; foreign currencies were translated using the rate as of December 31, 2020.
[3] K€ 17,234 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2020.
[4] K€ 29,482 was utilized as a guarantee to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2020.
[5] K€ 12,631 was utilized as a guarantee for delivery and performance obligations and to secure credit facilities; foreign currencies were translated using the rate as of December 31, 2020.
[6] Weighted interest rate as of December 31, 2020, foreign currencies were translated using the rate as of December 31, 2020.

Transaction costs relate to the arrangement fees paid to the financing banks and various legal and advisory costs directly attributable to the new financing. These costs are recognized as an expense over the terms of the liabilities using the effective interest method in accordance with IFRS 9.

The following table provides an overview of the Group's financial liabilities, measured on the basis of nominal amounts:

	Dec. 31, 2021	Dec. 31, 2020
Long-term		
Liabilities to banks	2,027,543	2,306,414
Lease liabilities	72,397	71,081
Miscellaneous	–	–
Less transaction costs	(30,379)	(43,754)
	2,069,561	**2,333,741**
Current		
Liabilities to banks	20,373	18,918
Lease liabilities	16,470	15,017
Miscellaneous	–	–
Less transaction costs	(8,966)	(10,560)
	27,877	**23,375**
Total Financial liabilities, net	**2,097,438**	**2,357,116**
Liabilities with a fixed interest rate	92,348	89,943
Liabilities with variable interest rates (hedged)	1,877,559	1,873,203
Liabilities with variable interest rates (not hedged)	166,876	448,284
Total financial liabilities, gross	**2,136,783**	**2,411,430**
Weighted average nominal interest rates for liabilities:		
To banks	2.68 %	2.69 %
Leases	5.91 %	5.82 %
Other loans	–	–

The average interest rate on financial liabilities was 2.82 % p.a. as of December 31, 2021 (previous year: 2.81 % p.a.).

Financial liabilities (not including transaction costs) are due as follows:

2022	36,843
2023	35,044
2024	29,598
2025	27,731
2026	1,973,269
After 2026	34,298
	2,136,783

	2021	2020
Non-current financial liabilities as of Jan. 1	**2,333,741**	**2,502,734**
Cash changes		
New debt raised	116	3,317
Payments of principal	(414,144)	(34,068)
Non-cash changes		
Additions to lease liabilities	15,307	21,435
Changes in maturities	(18,465)	(5,227)
Currency translation	4,475	(5,517)
Exchange rate changes	132,893	(160,027)
Amortization of transaction costs	15,638	11,094
Non-current financial liabilities as of Dec. 31	**2,069,561**	**2,333,741**

	2021	2020
Current financial liabilities as of Jan. 1	**23,375**	**23,521**
Cash changes		
New debt raised	–	50
Payments of principal	(22,806)	(6,333)
Non-cash changes		
Additions to lease liabilities	4,900	3,012
Changes in maturities	18,465	5,227
Currency translation	777	(1,136)
Exchange rate changes	979	(966)
Amortization of transaction costs	2,187	–
Current financial liabilities as of Dec. 31	**27,877**	**23,375**

Under the credit agreement, the following key financial covenants must be complied with and calculated in each compliance certificate submitted:

- First lien net leverage: ratio of senior consolidated net liabilities to consolidated EBITDA. This covenant relates exclusively to the revolving facility and is only tested if utilized by more than 40 %. It must not exceed 8x the value. Non-compliance is an event of default, but this can only be determined by the lenders under the revolving credit facility.

The following covenants are only relevant for certain planned transactions and compliance with them must be demonstrated on a pro forma basis before the transaction:

- Secured net leverage: ratio of secured, consolidated net liabilities to consolidated EBITDA. The covenant must be tested if collateral is to be provided that is subordinate to the collateral of the credit agreement. The covenant must be less than or equal to 5.25:1.00.
- Total net leverage: The ratio of total net liabilities to consolidated EBITDA must be less than or equal to 5.25:1.00, 4.50:1.00 or 3.75:1.00, depending on the transaction at issue.
- Fixed charge coverage: The ratio of EBITDA to interest paid (substantially) in cash must be greater than 2.0.

28. Other Non-Current Financial and Non-Financial Liabilities

	Dec. 31, 2021	Dec. 31, 2020
Other non-current financial liabilities	–	2,052
Other non-current non-financial liabilities	12,563	–
Total	**12,563**	**2,052**

In the previous year, other non-current financial liabilities essentially comprised economic aid for the corona-virus pandemic in the form of tax deferrals that will become due at a future date.

Other non-current non-financial liabilities represent the right of a customer to obtain the product from the Speyer production facilities.

29. Other Current Liabilities

	Dec. 31, 2021	Dec. 31, 2020
Other liabilities to customers	2,773	1,384
Deposits received for hardware	1,292	1,306
Interest payable	538	550
Derivative financial instruments with an effective hedge	377	15,255
Derivative financial instruments without an effective hedge	–	266
Liabilities to related companies	–	60
Miscellaneous liabilities	66,213	64,278
Financial liabilities	**71,193**	**83,099**
Deferred income and other deferred liabilities	112,799	96,490
Payroll liabilities	54,683	44,584
Other taxes liabilities	31,184	25,669
Advance payments received on orders	22,187	16,203
Liabilities to social security providers	9,372	9,296
Other financial obligations	39,426	42,613
Non-financial liabilities	**269,651**	**234,855**
Total	**340,844**	**317,954**

The item "Deferred income and other deferred liabilities" includes liabilities for outstanding invoices of K€ 96,106 (previous year: K€ 65,824). The remainder relates to deferred revenue of K€ 9,333, deferred rental income for gas cylinders (K€ 7,004), government grants (K€ 285) and other deferrals (K€ 71).

The item "Other obligations" includes contingent liabilities recognized in conjunction with purchase price allocation in 2019. The majority of this is attributable to Messer Gases Ltda., Brazil, and relates to obligations arising from pending proceedings.

30. Equity

Issued capital

The issued capital amounts to K€ 30 (previous year: K€ 30) as of December 31, 2021 and is fully paid in.

Capital reserves

By way of deposit agreement dated February 25, 2019, Investments S.à.r.l., Luxembourg, has agreed with Yeti GermanCo 1 GmbH to pay a capital contribution of K€ 225 into the Company's capital reserves. In accordance with the payment direction agreement of February 25, 2019, K€ 75 of the deposit was paid in cash directly to Yeti GermanCo 1 GmbH and indirect payments of K€ 75 each were made through Yeti GermanCo 2 GmbH and Yeti GermanCo 3 GmbH.

By way of loan agreement of February 25, 2019, Yeti Investments S.à.r.l., Luxembourg, granted Yeti German-Co 1 GmbH a shareholder loan of K€ 557,657. Subsequently, by way of deposit agreement dated February 27, 2019, a capital deposit in the form of a non-cash contribution was made by transferring the receivable of Yeti Investments S.à.r.l., Luxembourg, to the capital reserves of Yeti GermanCo 1 GmbH in the amount of K€ 557,657.

By way of agreement dated February 27, 2019, Messer SE & Co. KGaA and Yeti GermanCo 1 GmbH resolved to transfer receivables and liabilities from the Western European Messer companies to the Company's equity as a mixed non-cash contribution in the amount of K€ 150,207. K€ 89,549 of this amount relates to receivables, K€ 7,650 to liabilities and K€ 68,308 to the assignment of a purchase price receivable of Messer GasPack GmbH from Messer GasPack 2 GmbH.

On February 27, 2019, Messer SE & Co. KGaA transferred its shares in Yeti GermanCo 2 GmbH in the amount of K€ 600,515 to the capital reserves of Yeti GermanCo 1 GmbH. On February 28, 2019, Messer SE & Co. KGaA made a contribution of K€ 16 to the capital reserves of Yeti GermanCo 1 GmbH in order to achieve the intended shareholding in Yeti GermanCo 1 GmbH.

By way of deposit and assignment agreement of May 2/3, 2019, Messer SE & Co. KGaA has undertaken to assign the purchase price receivable for a 11 % minority interest in Messer Industriegase GmbH to Yeti GermanCo 1 GmbH and subsequently to add this to the free capital reserves of Yeti GermanCo 1 GmbH in the form of a non-cash contribution. The capital reserves of Yeti GermanCo 1 GmbH were thus increased by K€ 21,278.

The capital reserves amount to K€ 1,329,973 as of December 31, 2021 (previous year: K€ 1,329,973).

Retained earnings

Retained earnings comprise the undistributed past earnings of consolidated companies and the effects of the remeasurement of the net defined benefit pension liability, net of deferred taxes.

Other components of equity

This item is used to report changes in equity in other comprehensive income, to the extent that such changes do not relate to equity transactions with shareholders (e.g. capital increases or distributions). This includes the difference in currency translation (through other comprehensive in-come), the result of net in-vestments in foreign operations and changes in the fair value measurement of derivatives used for hedging purposes.

Non-controlling interests

This item comprises the shares held by other shareholders in the equity of consolidated subsidiaries. Non-controlling interests are held by other shareholders in Algeria and Belgium.

The dividend payments to other shareholders include distributions of the previous year's results.

The following companies have insignificant non-controlling interests:

Name and registered office of subsidiary	Country	Shareholding in percent	
		Dec. 31, 2021	Dec. 31, 2020
bECO2 B.V.B.A., Zwijndrecht	Belgium	70 %	70 %
Messer Algérie SPA, Algeria	Algeria	59.86 %	59.86 %

Capital management

A solid capital base is a key requirement for ensuring the continued existence of the Messer Industries Group as a going concern. The items reported in the statement of financial position are considered equity. Other items with the legal status of equity or other instruments similar in nature to equity are not used.

The owners Messer SE & Co. KGaA, CVC, management in key positions and the Advisory Board ensure that the trust of the lending banks, creditors and the market in general in Messer Industries Group is maintained through a strong capital base.

Management in key positions and the Advisory Board regularly review and report to lending banks on compliance with these and other targets.

31. Contingent Liabilities

Guarantees

Obligations from issuing guarantees were as follows:

	Dec. 31, 2021		Dec. 31, 2020	
	Maximum potential obligation	Amount reported as a liability	Maximum potential obligation	Amount reported as a liability
Guarantees	142,521	–	117,911	–

Financial guarantees essentially relate to commitments to cover the contractual obligations of the respective principal debtors. Pledges given to secure the liabilities of Group companies were eliminated in consolidation and are thus not included in the above table.

Other financial obligations

The Group has undertaken to invest in the acquisition, construction and maintenance of various production facilities. Obligations of this kind relate to the future purchase of plant and equipment at market prices. There are also long-term contracts giving rise to obligations. As of December 31, 2021, the commitments under orders, investment projects and long-term contracts amounted to K€ 584,685 (previous year: K€ 612,942).

Litigation

The Group recognizes provisions for legal disputes for court proceedings to the extent that the Group determines that an unfavorable outcome is probable and the amount of the loss can be reasonably estimated. For the other legal disputes, the Group considers the occurrence of a loss to be improbable, or the loss – or the framework of the potential loss – cannot be reasonably estimated at the current time. The outcome of legal disputes is always difficult to predict and results can differ from the current assessment.

On January 28, 2021, six employees from the Foundation Food Group ("FFG", previously Prime Pak Foods) in Gainesville, Georgia, USA, suffocated while they worked in a freezer room of a poultry processing plant, after liquid nitrogen leaked from a tank in freezing equipment for food processing supplied by Messer LLC. Eleven further persons were taken to hospital. Others may have come into contact with nitrogen but were not taken to hospital.

Messer leased the freezing equipment operated with liquid nitrogen to FFG and installed it in December 2020. Messer also sold nitrogen, which was stored in an external tank, to FFG, to operate the freezing equipment. In the framework of the product supply and lease agreement with Messer, FFG is responsible for operating and maintaining the freezing equipment.

Separate suits were filed against Messer by the families of the six dead and a group of almost two dozen FFG employees who claimed for injuries. Due to the current legal situation and the pending mediation proceedings, Messer estimated the expenses resulting from the incident and recognized an appropriate provision for possible plaintiff claims. Disclosing the exact amount recognized as a provision could seriously negatively impact Messer's position in the pending legal proceedings. For this reason, Messer is not disclosing this information.

Messer intends to reclaim all expenses which could result from this incident from existing insurance policies which cover these litigation risks. Messer has informed the insurance companies about the cases and claims. Messer is convinced that it has a valid and enforceable reimbursement claim against the insurance companies. This opinion is confirmed by the fact that the insurance company is actively involved in the defense of the legal dispute and pays all related attorney costs once the retention has been exceeded. For this reason, Messer is almost certain that the insurance company will reimburse all expenses and has recognized a claim to repayment. Publication of the exact amount recognized as a claim to repayment could seriously and negatively impact Messer's position in the pending court case. For this reason, Messer is not disclosing this information.

On December 1, 2020, there was an accident at a customer facility in California, USA, in which two employees lost their lives. The accident was the caused by the release of liquid nitrogen from a freezing tunnel; Messer believes that this was due to improper use. The relatives of the two deceased employees have filed lawsuits against the customer. In one case, the lawsuit has been extended to include Messer LLC, USA, as a defendant; it was served at the end of December 2021. In the other case, the lawsuit has been extended

to include Messer North America Inc., USA, and Messer LLC, USA, as defendants; they were served in mid-February 2022. In the event of legal action, we assume that a court will not grant damages against Messer. If, nonetheless, it is ruled that damages must be paid, these should be covered by the existing insurance.

A search was conducted at Messer Ibérica de Gases S.A., Spain, in November 2017. In this context, documents were confiscated relating to permits to build and operate our air separation units and a donation for the renovation of a city hall. A decision on whether an action will be filed is still pending.

The company was searched again in February 2019 in conjunction with a second investigation. The investigation was focused on the procurement, consumption and redistribution of electricity to Carburos Metallicos.

A third investigation is pending. The investigative records have not yet been disclosed; hence the subject and target of the investigation are still not yet known.

It is currently assumed that the probability of a criminal conviction is low. Fines might be possible in administrative procedures initiated separately at a later date.

After the Spanish regulator issued the Spanish power utility Endesa with a payment order for its grid usage fee, Endesa invoiced Messer Ibérica de Gases S.A. for an additional charge in the same amount of € 35.6 million for allegedly underpaying its grid usage fee in the period 2008 to February 2020. In the opinion of our local Spanish lawyers, both Endesa and Messer Ibérica de Gases S.A. have strong arguments for successfully defending against the claim for payment made by the Spanish regulator in its initial notice in an appeal, and thus also against the claim made by Endesa against Messer Ibérica de Gases S.A.
Even if a claim to payment were assumed, our local lawyers believe there are good arguments for reducing the amount claimed to less than € 10 million on the basis of the statute of limitations and the only partial utilization of electricity by Messer Ibérica de Gases S.A.

Messer Ibérica de Gases S.A. has recognized a provision of € 5 million for any fines for applications not made in accordance with the proper formal requirements and thus any permits not formally in place.

The proceedings are expected to take four to seven years.

Other legal matters

The Messer Industries Group is also exposed to a wide range of legal risks in the areas of competition and antitrust law, civil law, tax law and environmental protection.

Appropriate risk provisions have been recognized for these proceedings, provided that the obligation is reasonably certain. This is not currently expected to have any material impact on the financial position or financial performance of the Group.

32. Other Financial Instrument Disclosures

The following table shows the carrying amount and fair values of the individual financial assets and financial liabilities for each class of financial instruments as of December 31, 2021. It does not contain any information on the fair value of financial assets and financial liabilities not measured at fair value when carrying amount is a reasonable approximation of fair value.

	Measurement category as per IFRS 9	Carrying amount Dec. 31, 2021	Measurement in accordance with IFRS 9			Measurement in accordance with IFRS 16	Fair value as of Dec. 31, 2021
			Amortized cost	Fair value through OCI	Fair value through profit or loss		
Financial assets							
Other Financial Investments	**FVOCI**	**209**	–	209	–	–	**209[1]**
Other non-current receivables and assets	**AC**	**28,413**	28,413	–	–	–	
Trade receivables	**AC**	**283,289**	283,289	–	–	–	
Other current receivables and other assets	**AC**	**122,945**	122,945	–	–	–	
Derivative financial assets							
Derivatives without an effective hedge relationship	**FVTPL**	**935**	–	–	935	–	**935[1]**
Derivatives in an effective hedge relationship	**FVOCI**	**45,667**	–	45,667	–	–	**45,667[1]**
Cash and cash equivalents	**AC**	**274,917**	274,917	–	–	–	
Financial liabilities							
Non-current financial liabilities	**AC**	**1,997,164**	1,997,164	–	–	–	**1,939,772[1]**
Non-current lease liabilities	**n/a**	**72,397**	–	–	–	72,397	
Other non-current liabilities	**AC**	**–**	–	–	–	–	
Current financial liabilities	**AC**	**11,407**	11,407	–	–	–	
Current lease liabilities	**n/a**	**16,470**	–	–	–	16,470	
Trade payables	**AC**	**194,171**	194,171	–	–	–	
Other current liabilities	**AC**	**70,816**	70,816	–	–	–	
Derivative financial liabilities							
Derivatives without an effective hedge relationship	**FVTPL**	**–**	–	–	–	–	
Derivatives in an effective hedge relationship	**FVOCI**	**377**	–	377	–	–	**377[1]**

[1] Hierarchy level 2

The following table shows the carrying amounts and fair values for each class of financial instrument in accordance with IFRS 9 as of December 31, 2020:

	Measurement category as per IFRS 9	Carrying amount Dec. 31, 2020	Measurement in accordance with IFRS 9			Measurement in accordance with IFRS 16	Fair value as of Dec. 31, 2020
			Amortized cost	Fair value through OCI	Fair value through profit or loss		
Financial assets							
Other Financial Investments	**FVOCI**	**209**	–	209	–	–	**209[1]**
Other non-current receivables and assets	**AC**	**25,375**	25,375	–	–	–	
Trade receivables	**AC**	**256,792**	256,792	–	–	–	
Other current receivables and other assets	**AC**	**20,748**	20,748	–	–	–	
Derivative financial assets							
Derivatives without an effective hedge relationship	**FVTPL**	**–**	–	–	–	–	**–**
Derivatives in an effective hedge relationship	**FVOCI**	**3,686**	–	3,686	–	–	**3,686[1]**
Cash and cash equivalents	**AC**	**410,807**	410,807	–	–	–	
Financial liabilities							
Non-current financial liabilities	**AC**	**2,262,660**	2,262,660	–	–	–	**2,476,453[1]**
Non-current lease liabilities	**n/a**	**71,081**	–	–	–	71,081	
Other non-current liabilities	**AC**	**2,052**	2,052	–	–	–	**2,019[1]**
Current financial liabilities	**AC**	**8,358**	8,358	–	–	–	
Current lease liabilities	**n/a**	**15,017**	–	–	–	15,017	
Trade payables	**AC**	**148,045**	148,045	–	–	–	
Other current liabilities	**AC**	**67,578**	67,578	–	–	–	
Derivative financial liabilities							
Derivatives without an effective hedge relationship	**FVTPL**	**266**	–	–	266	–	**266[1]**
Derivatives in an effective hedge relationship	**FVOCI**	**15,255**	–	15,255	–	–	**15,255[1]**

[1] Hierarchy level 2

The Messer Industries Group uses the following hierarchy of inputs to measure fair value:

Level 1: Prices quoted in active markets accessible to the entity for identical assets or liabilities on the measurement date
Level 2: Inputs other than the quoted prices listed in Level 1 that can be observed either directly or indirectly for the asset or liability
Level 3: Unobservable inputs for the asset or liability

Non-current receivables and other non-current assets, and non-current financial liabilities and trade payables, are discounted to present value. For these purposes, the measurement model is based on interest rate curves and exchange rates for the respective maturities applicable as of the end of the reporting period.

Given their short remaining terms, the carrying amounts of current receivables, trade payables and cash funds are approximately their fair value.

The following measurement methods were used for measuring derivative financial assets and liabilities:

The fair value of forward exchange contracts is determined using quoted forward prices as of the closing date and net present values, based on yield curves with high ratings in the corresponding currencies. The market value results from the difference between the forward price as of the closing date and the price quoted at the time of purchase.

For interest swaps the fair value is determined as the present value of the estimated future cash flows. Estimates of the future cash flows from variable interest payments are based on quoted swap rates and interbank interest rates The estimated cash flows are discounted using a yield curve constructed from a similar source and which reflects the relevant comparable interbank interest rate as is used by market participants when pricing interest swaps. The estimate of the fair value is adjusted by the credit risk reflecting the credit risk of the company and counterparty. This is calculated on the basis of credit spreads derived from the credit default swap of bond prices.

For energy swaps the fair value is calculated on the basis of the forward electricity prices quoted on the electricity exchange. The market value results from the difference between the exchange price as of the closing date and the price quoted at the time of purchase.

Net gains and losses on financial instruments include the effects on earnings of financial instruments. These essentially include gains or losses on remeasurement from currency translation, adjustments to fair value, impairment losses and their reversals.

The following table shows the effects on earnings of financial instruments by IFRS 9 measurement category:

2021	From interest	Net gains and net losses			
		At fair value	Currency translation	Impairment losses	From disposals
Financial assets and financial liabilities at fair value through profit or loss	–	(198)	–	–	–
Financial liabilities at amortized cost	(78,992)	–	(858)	929	–
Financial assets at amortized cost	1,728	–	4,596	(921)	–
Financial assets at fair value through OCI	–	405	(55)	–	–
Financial liabilities at fair value through OCI	–	(137)	–	–	–

The following table shows the effects on earnings of financial instruments by IFRS 9 measurement category in 2020:

2020	From interest	Net gains and net losses			
		At fair value	Currency translation	Impairment losses	From disposals
Financial assets and financial liabilities at fair value through profit or loss	–	763	(65)	–	–
Financial liabilities at amortized cost	(90,711)	–	(2,040)	–	–
Financial assets at amortized cost	3,766	–	(4,367)	(2,861)	–
Financial assets at fair value through OCI	–	(240)	–	–	–
Financial liabilities at fair value through OCI	–	42	–	–	–

Derivative financial instruments

The Messer Industries Group essentially uses derivative financial instruments to hedge currency and raw material exposures and variable interest payments in order to reduce the related risks. Foreign currency risks from posted transactions are largely hedged. The exposure for raw material and currency hedges is derived from production requirement planning and the future purchases necessary over the hedged period, which are therefore highly probable. Interest hedges are based on a loan with a floating interest rate. The risk and its assessment are monitored continuously. The Messer Industries Group currently uses standard currency forwards, non-deliverable forwards (NDFs), interest derivatives and energy swaps as hedging instruments.

Hedges are entered into only with partners of good credit standing; any potential ineffectiveness resulting from them, if material, would be reported separately in profit or loss.

The Group currently uses derivative financial instruments to hedge future payments for energy purchases in the United States, and currency hedges for future USD payments from foreign currency liabilities in Canada and for future euro payments from foreign liabilities in the United States. It also uses derivative financial instruments to hedge future variable USD interest payments on the USD loan. These hedges are subject to hedge accounting in accordance with IFRS (cash flow hedges). The average hedge rate for energy purchases is USD 30.58 (EUR 27.00) per megawatt hour (previous year: USD 29.94 (EUR 24.40)), and for currency hedges

USD 1.230/CAD (previous year: USD 1.278/CAD) and EUR 1.175/USD (previous year: —) and the fixed interest rate remains unchanged against the previous year at 0.46 %.
Furthermore, cash flows in the currencies USD, EUR and COP are essentially hedged outside hedge accounting, using NDFs. To hedge future EUR interest payments on the EUR loan ("Facility B-2") an interest cap is used, the level of which is 0.25 %, unchanged to the previous year.

There are currently no derivative financial instruments in the Group that qualify as fair value hedges or hedges of a net investment in foreign operations.

Furthermore, hedges are entered into outside hedge accounting. These hedges nevertheless comply with the principles of risk management from an economic perspective.

Assets	**Dec. 31, 2021**		Dec. 31, 2020	
Financial derivatives	**Fair value (Carrying amount)**	Nominal amount	Fair value (Carrying amount)	Nominal amount
Currency forwards				
without a hedging relationship	9	627	–	140
as a cash flow hedge	662	17,522	–	–
Energy swaps				
without a hedging relationship	–	–	–	–
as a cash flow hedge	27,874	83,422	3,151	15,924
Interest derivatives				
without a hedging relationship	926	332,000	–	–
as a cash flow hedge	17,131	1,545,559	535	432,000
Other transactions				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	–	–
Total	**46,602**	**1,979,130**	**3,686**	**448,064**

Equity and Liabilities	Dec. 31, 2021		Dec. 31, 2020	
Financial derivatives	**Fair value (Carrying amount)**	Nominal amount	Fair value (Carrying amount)	Nominal amount
Currency forwards				
without a hedging relationship	–	–	36	986
as a cash flow hedge	31	824	820	17,170
Energy swaps				
without a hedging relationship	–	–	–	–
as a cash flow hedge	346	6,284	8,553	53,141
Interest derivatives				
without a hedging relationship	–	–	–	–
as a cash flow hedge	–	–	5,882	1,441,203
Other transactions				
without a hedging relationship	–	–	230	11,690
as a cash flow hedge	–	–	–	–
Total	**377**	**7,108**	**15,521**	**1,524,190**

The nominal volume of derivative financial instruments consists of the total nominal amounts of the individual contracts. By contrast, the fair value is calculated from the measurement of all contracts at prices on the measurement date. It shows how the result would have changed if the derivative contracts had been closed immediately as of the end of the reporting period.

The effective portion of the changes in the value of derivative financial instruments, which was recognized in the OCI in the reporting period, is K€ 61,576 (previous year: K€ -14,113). The amount that was reclassified from equity to the income statement in the context of hedge accounting in the reporting period is K€ -5,233 (previous year: K€ 9,948) and is essentially shown in cost of sales. The ineffective portion of the change in market value is recognized directly in profit or loss.

No significant ineffective portions of the change in the fair value of hedging instruments were identified in the fiscal year.

The following table shows when the cash flows from cash flow hedges occur and how they affect fair value in the income statement:

	Fair value (carrying amount) December 31, 2021	Nominal amount	up to 1 year	1 to 5 years	more than 5 years
Currency forwards					
Assets	662	17,522	16,221	1,301	–
Equity and Liabilities	(31)	824	824	–	–
Energy swaps					
Assets	27,874	83,422	25,211	58,211	–
Equity and Liabilities	(346)	6,284	–	6,284	–
Interest derivatives					
Assets	17,131	1,545,559	15,893	1,529,666	–
Equity and Liabilities	–	–	–	–	–

	Fair value (carrying amount) December 31, 2020	Nominal amount	up to 1 year	1 to 5 years	more than 5 years
Currency forwards					
Assets	–	–	–	–	–
Equity and Liabilities	(820)	17,170	17,170	–	–
Energy swaps					
Assets	3,151	15,924	1,229	14,695	–
Equity and Liabilities	(8,553)	53,141	22,914	30,227	–
Interest derivatives					
Assets	535	432,000	–	432,000	–
Equity and Liabilities	(5,882)	1,441,203	18,132	1,423,071	–

The Messer Industries Group uses derivatives in accordance with the International Swaps and Derivative Association (ISDA) Agreement. This agreement does not meet the criteria for offsetting derivative assets and liabilities in the consolidated statement of financial position, as it provides for offsetting rights only for future events, such as default or insolvency of the Group or counterparty.
Irrespective of whether these agreements are offset in the consolidated statement of financial position in line with IAS 32.42, as of the end of the reporting period there is no financial impact from an offset as this would only be possible if the derivative assets or liabilities had been concluded with the same counterparty. This does not apply to the Group as of December 31, 2021:

Management of financial risks

In conjunction with its operating activities, the Messer Industries Group is exposed to various financial risks, in particular credit, liquidity, interest and currency risk, which are described in more detail below. The Group's risk management system takes into account the fact that financial market developments are not foreseeable and is intended to minimize any potential negative impact on the Group's financial position. The Group uses derivative financial instruments to hedge against specific risks.

Risk management is handled by Group Treasury in compliance with guidelines approved by management. Group Treasury identifies, assesses and hedges financial risks. The guidelines contain general principles for risk management and detailed rules for specific areas, such as currency and interest rate risks, the use of derivative financial instruments and the investment of surplus cash. Further information on risk management can be found in the risk report section of the Group management report.

Credit risk

Credit risk is the risk of financial losses if customers or the counterparty to a financial instrument do not meet their contractual obligations.

There are no impairment losses for other financial assets and financial investments such as bank balances, securities and derivatives that are assets, as the credit risk is classified as remote. Such risks are limited by Group Treasury by selecting counterparties of good credit standing and by limiting the investment amounts. Credit risk in the Messer Industries Group mainly arises from trade receivables.

The corresponding impairment loss is measured at an amount equal to lifetime expected credit losses, based on an analysis of historical default data and forecasts of future economic conditions. Expected credit losses are a probability-weighted estimate of credit losses.

Credit risk in the Messer Industries Group is primarily influenced by customers' individual characteristics.

For risk management purposes, the credit rating of each customer is first analyzed individually before the respective Group company offers its standard delivery and payment terms. Where available, the analysis comprises annual financial statements, information from credit agencies, sector information and, in some cases, credit reports from banks. Specific limits are set individually for each customer. These represent the maximum outstanding amount that can be granted without the approval of the Risk Management Committee. The limits are reviewed at least once a quarter.

Due regard is also given to whether the customer is a natural person or a legal entity. Other factors taken into account are geographical location, market sector, the aging structure of receivables and the occurrence and duration of payment problems.

The expected credit loss over the total term of the respective receivables is taken into account in the measurement of the receivables. The Messer Industries Group uses the simplified impairment model for this.

In order to assess the expected credit risk, receivables are grouped on the basis of the existing credit risk and maturity structure of the receivables concerned. Customers are also divided into groups to monitor the risk of default. The groups with comparable credit risks to be taken into account for the Messer Industries Group result from the business areas and registered office of the respective customers.

If there is objective evidence that the forecast future inflows are impaired, a receivable is classified as impaired. Examples of such evidence include impending insolvency or breach of contract due to default. Default occurs if it is unlikely that a debtor will be able to settle its liabilities in full.

Each company in the Messer Industries Group therefore performs an analysis to determine whether there are objective indications of impairment for customers whose receivables are past due by a certain number of days, indicating an increased credit risk. At the latest, there is an in-creased credit risk when the amount of the receivable past due is higher than the average turnover. This can vary between 90 and 270 days depending on the company.

The following table provides information on the estimated credit risk and the expected credit losses for non-current and current trade receivables as of December 31, 2021, calculated in accordance with the default event:

2021	Receivables	Default rate in percent	Expected credit loss
Individually impaired	106,196	26.7	28,340
Collectively impaired in accordance with default event			
Days past due:			
Not past due	162,046	1.1	1,738
between 1 and 30 days	30,084	3.4	1,025
between 31 and 60 days	7,199	9.6	692
between 61 and 90 days	3,978	16.9	673
between 91 and 120 days	2,463	39.5	973
between 121 and 180 days	2,450	23.0	563
between 181 and 270 days	1,884	25.9	488
more than 271 days	3,388	53.6	1,816
	319,688		**36,308**

Impairment losses on non-current and current trade receivables developed as follows:

	2021	2020
As of Jan. 1	**35,428**	**38,347**
Net change through profit or loss resulting from the impairment losses	921	2,861
Amounts written off as irrecoverable in the fiscal year	(402)	(1,834)
Exchange rate changes	361	(3,946)
As of Dec. 31	**36,308**	**35,428**

The impairment loss relates to trade receivables and was calculated exclusively on the basis of lifetime expected credit losses.

The following table provides information on the estimated credit risk and the expected credit losses for non-current and current trade receivables as of December 31, 2020:

2020	Receivables	Default rate in percent	Expected credit loss
Individually impaired	55,193	45.4	25,058
Collectively impaired in accordance with default event			
Days past due:			
Not past due	180,114	1.6	2,811
between 1 and 30 days	31,849	3.2	1,011
between 31 and 60 days	9,003	8.5	762
between 61 and 90 days	3,546	17.7	627
between 91 and 120 days	2,958	42.5	1,256
between 121 and 180 days	2,162	26.0	563
between 181 and 270 days	2,626	32.6	857
more than 271 days	4,779	52.0	2,483
	292,230		**35,428**

Liquidity risk

Liquidity risk, i.e. the risk that the Messer Industries Group cannot meet its financial obligations, is limited both by creating the necessary financial flexibility and by effective cash management. In addition to cash funds, the Messer Industries Group also has access to long-term, freely available credit facilities to safeguard its liquidity. There are no indications that any of the credit facilities granted are not fully available. Liquidity risks are monitored regularly and reported to management, in particular regarding compliance with the financial covenants described in note 27 “Financial Liabilities”.

Trade payables and other current liabilities have remaining terms of less than one year. Information relating to the maturities of financial liabilities can be found in note 27 “Financial Liabilities”.

The following table shows the expected cash flows for financial liabilities:

Description	Carrying amount Dec. 31, 2021	Expected cash flow	Cash flows 2022		Cash flows 2023 – 2026		Cash flows from 2027	
			Interest	Payment of principal	Interest	Payment of principal	Interest	Payment of principal
Financial liabilities measured at amortized cost	**2,273,558**	**(2,539,024)**	**(55,173)**	**(285,360)**	**(170,948)**	**(2,027,543)**	**–**	**–**
Financial liabilities[1]	2,008,571	(2,274,037)	(55,173)	(20,373)	(170,948)	(2,027,543)	–	–
Other non-current liabilities	–	–	–	–	–	–	–	–
Trade payables	194,171	(194,171)	–	(194,171)	–	–	–	–
Other current liabilities	70,816	(70,816)	–	(70,816)	–	–	–	–
Financial liabilities at fair value through OCI	**377**	**(377)**	**–**	**(31)**	**–**	**(346)**	**–**	**–**
Financial derivatives[2]	377	(377)	–	(31)	–	(346)	–	–
Financial liabilities at fair value through profit or loss	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Financial derivatives[2]	–	–	–	–	–	–	–	–
Lease liabilities	**88,867**	**(114,302)**	**(4,397)**	**(16,470)**	**(11,916)**	**(38,098)**	**(9,122)**	**(34,299)**

[1] The transaction costs for financing were already reported as cash outflows and are therefore not a component of future cash flows.
[2] Repayments of principal for financial derivatives are contractual cash flows.

This includes all instruments that were in the portfolio on December 31, 2021 and for which payments were already contractually agreed. Forecast figures for future new liabilities are not included. Foreign currency amounts were translated using the rate as of December 31, 2021.

Description	Carrying amount Dec. 31, 2020	Expected cash flow	Cash flows 2021		Cash flows 2022 – 2025		Cash flows from 2026	
			Interest	Payment of principal	Interest	Payment of principal	Interest	Payment of principal
Financial liabilities measured at amortized cost	**2,488,693**	**(2,862,376)**	**(62,914)**	**(234,541)**	**(246,451)**	**(77,304)**	**(10,004)**	**(2,231,162)**
Financial liabilities[1]	2,271,018	(2,644,701)	(62,914)	(18,918)	(246,451)	(75,252)	(10,004)	(2,231,162)
Other non-current liabilities	2,052	(2,052)	–	–	–	(2,052)	–	–
Trade payables	148,045	(148,045)	–	(148,045)	–	–	–	–
Other current liabilities	67,578	(67,578)	–	(67,578)	–	–	–	–
Financial liabilities at fair value through OCI	**15,255**	**(15,255)**	**–**	**(4,645)**	**(5,883)**	**(4,727)**	**–**	**–**
Financial derivatives[2]	15,255	(15,255)	–	(4,645)	(5,883)	(4,727)	–	–
Financial liabilities at fair value through profit or loss	**266**	**(266)**	**–**	**(266)**	**–**	**–**	**–**	**–**
Financial derivatives[2]	266	(266)	–	(266)	–	–	–	–
Lease liabilities	**86,098**	**(114,650)**	**(4,609)**	**(15,017)**	**(12,774)**	**(36,085)**	**(11,169)**	**(34,996)**

[1] The transaction costs for financing were already reported as cash outflows and are therefore not a component of future cash flows.
[2] Repayments of principal for financial derivatives are contractual cash flows.

Interest risk

Interest risk can arise when interest-bearing liabilities are not hedged in terms of maturity or amount by either corresponding assets or derivative instruments. The objective is to optimize the net interest result and minimize interest risks. The Group has hedged 81.4 % of its total financial liabilities against interest rate changes through fixed interest rate agreements.

Variable financial instruments are subject to a cash flow risk with regard to the uncertainty of future interest payments. The cash flow risk is measured using a sensitivity analysis. The sensitivity analysis assumes a shift in the yield curves for all currencies by +/- 100 basis points as of December 31, 2021.

The change in interest rate derivatives is recognized in profit or loss using the current market interest at the end of the reporting period. If market interest rates had been 100 basis points higher (lower) as of December 31, 2021, consolidated net profit would have been K€ 3,167 (previous year: K€ 4,072) higher or K€ 796 (previous year: K€ 255) lower.

For variable financial liabilities and our financial investments, an interest rate level 100 basis points higher (lower) as of December 31, 2021 would have produced a result (higher) lower by K€ 1,080 (previous year: K€ 375). As of December 31, 2021, the exposure to interest rate risk was K€ 108,041 (previous year: K€ 37,477).

Currency risk

Currency risk for the Messer Industries Group arises from both financing and operating activities in an international environment. Foreign currency risks are hedged to the extent that they have a significant influence on the Group's cash flows.

Foreign currency risks relating to financing activities result from foreign currency financial liabilities and loans for the financing of Group companies. Group Treasury hedges these risks. Currency derivatives are used to convert financial obligations and intragroup loans denominated in foreign currencies into the functional currency of the Group companies.

As far as operating activities are concerned, the individual Group companies predominantly conduct their business in their own functional currency. The Messer Industries Group's currency risk from operating activities is therefore considered remote overall. However, a number of Group companies are exposed to foreign currency risks in connection with operational transactions not de-nominated in their own functional currency. This mainly relates to payments in conjunction with a long-term supply agreement and payments in conjunction with investments. The Messer Industries Group also uses currency derivatives to hedge these risks.

Currency risks as referred to by IFRS 7 result from financial instruments that are denominated in a currency other than the functional currency and that are monetary in nature; exchange rate differences arising from the translation of financial statements into the Group currency are not taken into account.

Currency risk is measured on the basis of sensitivity analyses. The currency analysis assumes an appreciation (depreciation) of all currencies by 10 % compared to the euro.

If the euro appreciated (depreciated) by 10 % against the major currencies, this would produce a hypothetical result K€ 14,317 lower (higher) (previous year: K€ 21,250 lower). The net currency risk from statement of financial position exposures was as follows:

As of Dec. 31, 2021	USD	CAD	CHF	BRL
Foreign currency risk from statement of financial position exposures	(57,109)	222,275	(528)	(4,933)
Foreign currency risk from forecast transactions	(41,585)	–	(5,000)	(16,993)
Transactional foreign currency exposures	**(98,694)**	**222,275**	**(5,528)**	**(21,926)**
Exposures hedged in economic terms by derivatives	47,045	–	–	–
Unhedged foreign currency exposures	**(51,649)**	**222,275**	**(5,528)**	**(21,926)**
Change in foreign currency exposures as a result of a 10 % appreciation of the euro	5,165	(22,228)	553	2,193

33. Related Parties

Transactions with the following entities and individuals are treated as related party transactions.

Related companies

The ultimate company with significant influence is Messer Industrie GmbH, which is controlled by the Messer family. Associated companies, joint ventures and joint operations and non-consolidated subsidiaries classified as related parties are shown in the list of shareholdings.

The following companies are considered related parties:

- CVC Capital Partners VII (A) L.P., UK
  CVC Capital Partners VII (A) L.P. holds 94.51 % in Yeti Holdings Jersey Limited, USA, as of December 31, 2021.

- Greenbelt Ltd., British Virgin Islands, and Hardtberg Grundstücks GmbH
  Stefan Messer, Managing Director and co-shareholder of Messer Industrie GmbH, is also a Managing Director and co-shareholder or sole shareholder of these companies.

- Messer SE & Co. KGaA (Messer Group)
  Messer SE & Co. KGaA holds 54.46 % in Yeti GermanCo 1 GmbH and 58.02 % in Yeti Warehouse GmbH as of December 31, 2021.

- Messer Management SE
  Messer Management SE is the general partner (SE) of Messer SE & Co. KGaA.

- Messer Holding GmbH
  Messer Holding GmbH is the parent company of Messer SE & Co. KGaA and holds 100 % in Messer SE & Co. KGaA as of December 31, 2021.

- Messer Industrie GmbH
  Messer Industrie GmbH holds 100 % in Messer Holding GmbH as of December 31, 2021.

- MIG Holding GmbH and Messer Eutectic Castolin Group (MEC Group)
  100 % of the shares in MEC Global GmbH are held by MIG Holding GmbH, an affiliate of Messer Industrie GmbH with the same ownership structure.

- Messer Medical Home Care Holding GmbH (Home Care Group)
  The Messer Group has spun off its home care activities into an independent group since March 31, 2011. The parent company of this Group, Messer Medical Home Care Holding GmbH, is wholly owned by MEC Holding GmbH, whose interest is held by MIG Holding GmbH Wages.

- Yeti Americas Management Participation GmbH & Co. KG
  Yeti Americas Management Participation GmbH & Co. KG holds 4.21 % in Yeti GermanCo 1 GmbH as of December 31, 2021.

- Yeti Europe Management Participation GmbH & Co. KG
  Yeti Europe Management Participation GmbH & Co. KG holds as 1.98 % in Yeti GermanCo 1 GmbH as of December 31, 2021.

- Yeti Holdings Jersey Limited, Jersey
  Yeti Holdings Jersey Limited holds 100 % in Yeti Holdings S.à.r.l., Luxembourg, as of December 31, 2021.

- Yeti Holdings S.à r.l., Luxembourg
  Yeti , Holdings S.à.r.l., Luxembourg holds 100 % in Yeti Investments S.à.r.l., Luxembourg, as of December 31, 2021.

- Yeti Investments S.à.r.l., Luxembourg
  Yeti Investments S.à.r.l. holds 41.95 % in Yeti Warehouse GmbH and 39.35 % in Yeti GermanCo 1 GmbH as of December 31, 2021.

- Yeti Management Verwaltungs GmbH
  Yeti Management Verwaltungs GmbH is the general partner (GmbH) of Yeti Americas Management Participation GmbH & Co. KG and Yeti Europe Management Participation GmbH & Co. KG as of December 31, 2021.

- Yeti Warehouse GmbH
  Yeti Warehouse GmbH holds 100 % in Yeti Management Verwaltungs GmbH as of December 31, 2021. The Yeti GermanCo 1 GmbH Employee Participation Program is bundled in Yeti Warehouse GmbH.

The following transactions were performed with related companies:

	Jan. 1 – Dec. 31, 2021	Jan. 1 – Dec. 31, 2020
Revenue and oncharging		
Messer SE & Co. KGaA	10,585	1,809
Associated companies, joint ventures and joint operations	74	20
Other related parties	5,826	4,414
	16,485	**6,243**
Purchased goods and services		
Messer SE & Co. KGaA	13,085	9,325
Associated companies, joint ventures and joint operations	4,065	4,955
Other related parties	7,773	9,135
	24,923	**23,415**

	Dec. 31, 2021	Dec. 31, 2020
Trade receivables		
Messer SE & Co. KGaA	1,340	354
Associated companies, joint ventures and joint operations	47	49
Other related parties	690	673
	2,077	**1,076**
Inventories, other financial and non-financial assets		
Messer SE & Co. KGaA	140	190
Associated companies, joint ventures and joint operations	6,536	5,023
Non-consolidated subsidiaries	128	100
Other related parties	93	52
	6,897	**5,365**
Trade payables		
Messer SE & Co. KGaA	6,017	1,957
Associated companies, joint ventures and joint operations	940	506
Other related parties	2,040	960
	8,997	**3,423**
Other financial and non-financial liabilities		
Messer SE & Co. KGaA	–	7
Associated companies, joint ventures and joint operations	–	49
Other related parties	–	4
	–	**60**

The receivables from related parties result from service agreements and sales transactions with varying maturities. The receivables are not secured by collateral and do not bear interest. There were no impairment losses on receivables from related parties (previous year: K€ 0) and no uncollectible receivables from related parties recognized as an expense for the period (previous year: K€ 0). No loans were granted to related companies or were extended by them to the Messer Industries Group.

Related persons

Members of management in key positions

Management in key positions at Yeti GermanCo 1 GmbH included the following in the fiscal year:

- Carsten Knecht, Managing Director of Yeti GermanCo 1 GmbH
- Nicolas Denis, Senior Vice President Western Europe (from January 1, 2021) and Managing Director Messer France S.A.S., France
- Jan Desmeth, Senior Vice President West Europe and Managing Director Messer Belgium N.V., Belgium (until January 31, 2021)
- Jens Lühring, CEO Messer Industries USA Inc., USA
- Gareth Parkin, CFO Messer Industries USA Inc., USA

The total remuneration of the members of management in key positions at Yeti GermanCo 1 GmbH amounted to K€ 3,067 in the fiscal year (previous year: K€ 3,025).

Of this figure, fixed remuneration including benefits in kind and other fringe benefits amounted to K€ 1,358 (previous year: K€ 1,351). The total amount of variable remuneration was to K€ 1,476 (previous year: K€ 1,433) and is linked to the achievement of certain performance indicators. Post-employment benefits amount to K€ 233 (previous year: K€ 241).

Yeti GermanCo 1 GmbH Employee Participation Program

For persons in key positions and other senior employees of the Group and Messer SE & Co. KGaA a management participation program was created in the form of management investment companies as a shareholder of Yeti GermanCo 1 GmbH. The management participation program enables management and other executives to invest in the Messer Industries Group and, in the event of an exit by the current main shareholders (through sale or IPO), to participate in the expected increase in value. The management participation program gives participants the opportunity to indirectly acquire shares in Yeti GermanCo 1 GmbH through a predetermined structure. These investments participate indirectly in the returns and performance of a particular geographically defined business unit consisting of basic residual amounts and preference interest-bearing equity instruments (VSLs). These instruments bear defined interest on the capital invested and must be served before the residual amounts.

As the companies of Messer Industries Group are not required to settled share-based payments themselves, this constitutes equity-settled share-based payment in accordance with IFRS 2.43B (b).

The purchase prices for the transfer of shares to the participants of the management participation program were determined as of March 1, 2019, taking into account the value of the contribution by Messer SE & Co. KGaA and CVC Capital Partners Fund VII.
The participants can sell the shares they have acquired only to Yeti Warehouse GmbH. If someone leaves, Yeti Warehouse GmbH is entitled to repurchase his shares.

In the event of an early sale of shares or if a participant leaves the Yeti GermanCo 1 Group as a good leaver, participants receive a formula-based market value of the shares for a contractually determined portion of the portfolio, which is vested up to the date they leave. For the non-vested portion, good leavers receive the lower amount of the formula-based market value and the purchase price less refunds since received. Five years after the specified date of entry, the good leaver receives 100 % of the market value of the respective portfolio on leaving. In the event of leaving as a bad leaver, the employee receives the lower of the formula-based market value and the purchase price.

The program stipulates that, after a defined exit event (which can include an IPO or a similar transaction in which all or substantially all the Group's assets are disposed of so that current investors retain less than 50 % of the shares), the proceeds of the sale, after deduction of the costs, are used to serve the instruments described (first the VSLs and then the residual amounts), taking the intended interest into account. The investors are required to cooperate in the exit event and to participate in the proceeds of the sale in proportion to the portfolio they hold.

In order to determine the expense for the period as referred to by IFRS 2, the purchase prices to be paid by the participants were compared against the fair values of the share classes at the respective date of entry (date of grant). If this shows that the employees acquired the shares at a value lower than the fair value, the fair value of the benefit granted to the employee from the time the instrument was granted is calculated as the difference. As the purchase prices to be paid were equal to the fair value as of the grant date, there was no difference that would have been recognized as the "grant date fair value".

Advisory Board

- Dr. Hans-Gerd Wienands-Adelsbach, Chairman, Lawyer
- Ernst Bode, COO Europe Messer SE & Co. KGaA
- Stefan Messer, CEO Messer SE & Co. KGaA
- Dr. Alexander Dibelius, Managing Partner CVC Capital Partners, UK
- Dr. Daniel Pindur, Partner CVC Capital Partners, UK
- Lars Haegg, Principal CVC Capital Partners, UK

The Advisory Board received no remuneration from Group companies of Yeti GermanCo 1 GmbH for the fiscal year.

34. Events after the Reporting Period

The Russian army attacked Ukraine on February 24, 2022. A large number of countries responded with massive sanctions against Russia. Given the unpredictable nature of future developments and the considerable uncertainty this entails, we are unable to reliably estimate the financial impact, including on our business activities, at this time. The general economic environment is largely dependent on how the military conflict in Ukraine unfolds and its ramifications (duration, expansion to other territories and further sanctions). If the current developments continue, we anticipate tangible negative implications in various areas in fiscal 2022; the business activities of our customers can also have repercussions on the operations of the Group. However, these cannot yet be adequately quantified at the current time.

In January and February 2022, two of the six plaintiff claims resulting from the accident at the Foundation Food Group in Gainesville, Georgia, USA, were paid by the insurance company. Publication of the exact amount could seriously and negatively impact Messer's position in the pending court case. For this reason, we are not disclosing this information.

35. Previous Year Financial Statements

The financial statements for the previous year as of December 31, 2020 were approved by the Advisory Board on April 16, 2021 and published in the German Federal Gazette.

36. Auditors' Fees

The fees of the auditor of the German Group companies were exclusively for audits of financial statements and amounted to K€ 364 in fiscal 2021 (previous year: K€ 379).

Bad Soden am Taunus, March 31, 2022

Appendix

List of shareholdings as of December, 31 2021

Country	Name	Domicile	Equity (in € thousands)	Direct/ Indirect	Share-holding in %	Net result after taxes (in € thousands)
Affiliated companies included in the consolidated financial statements						
Algeria	Messer Algérie SPA	Alger	3,325	I	59.86	1,942
Belgium	bECO2 B.V.B.A.	Zwijndrecht	131	I	70.00	15
	Messer Belgium N.V.	Zwijndrecht	29,476	I	100.00	3,830
Brazil	Messer Gases Ltda.	Sao Paulo	141,650	I	100.00	39,997
	Messer Indústria de Gases Ltda	Sao Paulo	11,061	I	100.00	1,141
Canada	Messer Canada Inc.	Ontario	64,502	I	100.00	27,899
Chile	Messer Chile Limitada	Santiago	21,895	I	100.00	1,113
Colombia	Messer Energy S.A.S. E.S.P.	Bogotá	113	I	100.00	151
	Messer Colombia S.A.	Bogotá	63,901	I	100.00	8,266
	REMEO Medical S.A.S.	Bogotá	654	I	100.00	(1,125)
France	Messer France S.A.S.	Suresnes	115,334	I	100.00	10,528
Germany	Messer Industries GmbH	Sulzbach	1,092,323	I	100.00	(2,016)
	Messer GasPack 2 GmbH	Sulzbach	78,113	I	100.00	3,306
	Messer Industriegase GmbH	Sulzbach	68,646	I	100.00	(357)
	Messer Produktionsgesellschaft mbH Salzgitter	Sulzbach	14,533	I	100.00	8
	Messer Produktionsgesellschaft mbH Siegen	Sulzbach	12,220	I	100.00	1
	Messer Produktionsgesellschaft mbH Speyer	Bad Soden am Taunus	6,529	I	100.00	(2)
	Yeti GermanCo 1 GmbH	Sulzbach	1,345,670	0	100.00	18,045
	Yeti GermanCo 2 GmbH	Sulzbach	1,093,387	D	100.00	-
	Yeti GermanCo 3 GmbH	Sulzbach	1,093,282	I	100.00	-
Netherlands	Messer B.V.	Moerdijk	9,901	I	100.00	578
	Messer Industries B.V.	Moerdijk	244,954	I	100.00	781
Portugal	MesserGas Distribuicao des Gases Industriais, Unip	Lisbon	758	I	100.00	222
Puerto Rico	Messer Gas Puerto Rico Inc.	San Juan	1,263	I	100.00	2,202
Switzerland	Messer Schweiz AG	Lenzburg	31,560	I	100.00	4,306
Spain	Adamite Investments S.L.	Tarragona	6,163	I	100.00	522
	Leteira Investments S.L.	Tarragona	126,980	I	100.00	20,280
	Litadas Investments S.L.	Tarragona	43	I	100.00	(2)
	Messer Ibérica de Gases S.A.	Tarragona	18,357	I	100.00	509
	MG Industries Iberica S.L.	Tarragona	114,069	I	100.00	8,189
	Toubkal Investments S.L.	Tarragona	9,084	I	100.00	(6)
USA	General Gases of the V.I. Inc.	St. Croix	8,381	I	100.00	227
	Messer Energy Services Inc.	Delaware	(2,654)	I	100.00	(622)
	Messer Industries USA Inc.	Delaware	296,577	I	100.00	(43,251)
	Messer LLC	Delaware	1,754,828	I	100.00	228,804
	Messer Merchant Production LLC	Delaware	6,387	I	100.00	(4,801)
	Messer North America Inc.	Delaware	69,064	I	100.00	(47,100)

Country	Name	Domicile	Equity (in € thousands)	Direct/ Indirect	Share-holding in %	Net result after taxes (in € thousands)
Companies accounted for using the proportional consolidation						
USA	East Coast Nitrogen Company LLC	Delaware	58,577	I	50.00	(4,861)
	East Coast Oxygen Company LLC	Delaware	4,781	I	50.00	(1,438)
Companies accounted for using the equity method						
Belgium	GreenCO2 N.V.	Zwijndrecht	71	I	35.00	5
France	Limes S.A.S.	Saint-Herblain	4,905	I	50.00	1
Germany	HyDN GmbH	Jülich	24	I	25.00	–
USA	Cliffside Helium LLC	Delaware	85	I	26.00	18
	Cliffside Refiners LP	Delaware	1,915	I	25.74	838
Affiliated companies not included in the consolidated financial statement						
France	Lida S.A.S	St.Quentin Fallavier	-	I	21.50	– [1]
	Soprogaz S.N.C.	Beauvais	-	I	50.00	– [1]

[1] Affiliated companies not included in the consolidated financial statements owing to immateriality for the net assets, financial position and result of operations