Metal powders are everywhere in our modern society

From our homes to our offices via our cars and grocery stores

ANNUAL AND SUSTAINABILITY REPORT 2023

Höganäs

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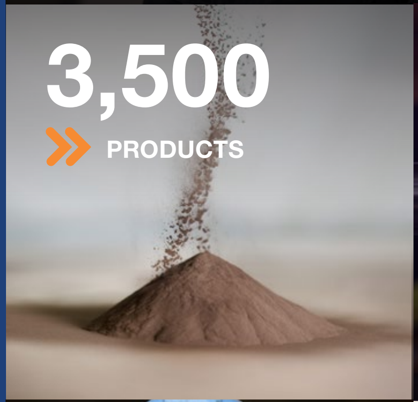
About Höganäs

Höganäs is the world's leading producer of metal powders for industrial applications. Founded in 1797, we have been through many changes in our history, and we continue to evolve to better meet the needs of tomorrow. Our ambition is to lead the transformation and become the preferred supplier for sustainable metal powders globally.

Our four product areas serve customers in a wide range of industries, such as aerospace, medical, energy production and agricultural equipment. Our most important end-market is automotive.

Höganäs is owned by Lindéngruppen and FAM. Read more about the industries we serve, our products and solutions, and our expertise at www.hoganas.com.



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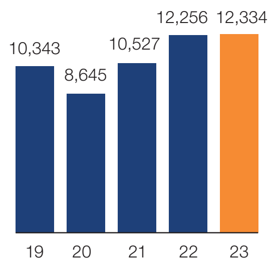
2023 in brief

Markets in 2023 were impacted by economic uncertainty due to the war in Ukraine, inflation and high interest rates. Höganäs' net sales remained basically unchanged as exchange rates effects and price increases compensated for lower production volumes. Both the underlying result and operational cashflow was strong. In sustainability, we increased the share of fossil free electricity and biogas and made progress in our work of finding new reducing agents. Work remains to be done however in workplace health & safety, where our record remains unsatisfactory.

TURNOVER (SEK M)



SALES PER REGION

- APAC 40%
- Americas 31%
- EMEA 29%

NUMBER OF RECORDABLE INJURIES

65 (71)

READ MORE ON PAGE 36

EMISSIONS SCOPE 1-2, REDUCED BY

46%

SINCE 2018

SOME HIGHLIGHTS FROM THE YEAR

APRIL
HÖGANÄS' SCIENCE BASED NET-ZERO TARGETS VALIDATED

SCIENCE BASED TARGETS

www.hoganas.com/sv/about-hoganas/associations/sbti/

OCTOBER
HÖGANÄS IN CHINA CELEBRATED
30-YEAR ANNIVERSARY

NOVEMBER
HÖGANÄS WAS APPOINTED
GOLD WINNER
of the EPMA Powder Metallurgy Sustainability award

FEBRUARY
- New ArcX centers in Texas, US and Pune, India strengthens Höganäs' position in surface coating

JUNE
- Closure of our Metasphere facility in Luleå, Sweden

SEPTEMBER
- Henrik Ager was appointed new CEO
- The carbon footprint of Somaloy 5P was verified by a third-party. Read more on page 28

NOVEMBER
- The European Powder Metallurgy Association gives its first ever Gold Sustainability Award to Höganäs
- Inauguration of new office in Tokyo, Japan

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Challenges but also opportunities ahead

2023 was a year characterized by economic uncertainty as global conflicts, inflation, and high interest rates weighed on consumers' demand for big ticket items such as cars.

We need to move fast and in multiple areas to become a relevant supplier for battery electric drivetrains.

For Höganäs, this translated into lower demand and production volumes that were down 4.6 percent year on year. Financially, we weathered the downturn well. Price increases and a weaker SEK compensated for the lower volumes, as we managed to keep our top line unchanged and produce a strong result, with an underlying EBITDA margin of 12.1 percent, in line with last year. We also delivered a record cashflow from operations of SEK 1,937 million supported by decreased inventories.

We also made further progress on reducing our climate impact, transitioning to fossil-free electricity, and using more biogas in our processes. We will continue our efforts to lower emissions in our production processes and have been successfully testing replacements for conventional reducing agents, such as coke and anthracite, with alternatives like biochar.

But while Höganäs delivered a strong financial result and made significant progress on its sustainability transition, the safety performance is not at acceptable levels. Although there has been a small improvement in the Total Recordable Injury Frequency Rate (TRIFR), the level is still too high, and this is something we must turn around.

Excellent position

I started as CEO in October, and it is a privilege to manage such a well-established industrial company as Höganäs. During my first few months, I have been impressed by the people working here. The passion for the company exhibited by our co-workers through their often very long tenures, alongside their strong competence and knowledge of materials, production processes and application areas for our metal powder – it says something very positive about Höganäs. We also have two very good owners, FAM and Lindéngruppen, that complement each other in how they support the company.

In other words, we are in an excellent position to take on the challenges ahead of us. For many years, the Höganäs business was quite stable. The relatively quick transition to electric vehicles (EVs) is disrupting our main customer segment, the automotive industry with most powder applications within the internal combustion drivetrain, and poses a significant challenge for Höganäs. We need to move fast and in multiple areas to become a relevant supplier for battery electric drivetrains.

To succeed in creating more demand for both existing and new products, we are actively advancing our position from the back-end of the automotive value chain to develop relationships with the OEM designers of new electric vehicles. Our end-customers in the automotive industry are also setting ambitious scope 3 emissions reduction targets. This means that we as a supplier must reduce our climate impact to stay relevant. With reduction targets set, sustainability will become a stronger selling point and we are working with Life Cycle Assessments to provide the required fact base for the sustainability performance of our products.

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Transition presents opportunities

The EV transition does not only pose a challenge, it also presents new opportunities for us to grow our business. We have already identified and developed products for two application areas: reduction gears and electric traction motors. We have progressed to the final stages of developing a soft magnetic composite powder that could outperform laminated steel for the less common but more space-efficient axial flux motors and we are working on developing the same for the now dominant radial flux motors.

A big opportunity that we have not discussed before is in lithium iron phosphate (LFP) and lithium manganese iron phosphate (LMFP) batteries. Today, the most common type of battery in EVs is NMC (Nickel, Manganese, Cobalt). Iron-based chemistries are comparatively cheaper, made from more abundant input materials, longer-lasting and safer. And since NMC batteries are susceptible to the risk of thermal runaway failure, they cannot be assembled as tightly in the battery pack, which means that the iron-based chemistries' disadvantage in energy density at the cell level, largely can be made up for at the battery pack level. As a result, current market forecasts project LFP and LMFP batteries will make up about half of the EV battery market by 2035. In addition, there may be additional opportunity in iron-based energy storage systems for the power grid. And as manufacturing of these batteries is being established outside of China, it presents a significant growth opportunity for Höganäs.

We are also seeing opportunities for growth in other application areas, not least for surface coating in gas turbines, aviation, and fuel cells. 3D printing is an additional area with strong growth, especially within aerospace. In summary, we are presented with numerous opportunities with the potential to offset the expected drop in sales to internal combustion vehicles and expand our business beyond its current size.

New organisation

To enable Höganäs to be faster and more effective in decision making and execution, we are restructuring the company into five global divisions with full responsibility for their strategy, operational execution, and P&L. The goal is to enhance efficiency, speed up our response to market and customer needs, enable faster decision making and to create a work environment that is more fun – all while driving us towards greater success. The new organisation will be operational on 2 April.

As we move forward, we must improve our workplace health and safety. Our safety performance worsened during 2023, and our performance is now lagging our industry peers. This is not acceptable. We want to lead our industry in safety. The culprit we have identified is in our own behaviour. We are not following protocols, not identifying risks as we should, not wearing the right equipment. It is easy to blame workplace culture for this, but culture is just the result of our actions. If we specify and follow-up on the specific actions, we will change our behaviour and as a result our safety culture for the better. Improving both our safety and health performance will be a top priority for me going forward.

The fact is that we have great co-workers at Höganäs. The competence and commitment to both the company and our customers that I have seen so far, make me certain that we can capture the opportunities and successfully take on the challenges that lie ahead. With that, I want to thank all our co-workers, customers, suppliers, and owners for our strong performance in 2023!

Henrik Ager
President and CEO

FOCUS AHEAD

In 2024, we will continue executing on our short- and long-term priorities.

- Improve health and safety performance
- Continue executing on our climate roadmap
- Implement new organisation
- Develop new products for battery electric drivetrains

Pioneering a renewable reducing agent

One of the first steps in all steel production is to remove the oxygen in the iron ore by using a reducing agent. Höganäs, like most other industrial steel producers, currently uses fossil coal, which results in high greenhouse gas emissions. To reach net-zero in scope 1 and 2 by 2030, Höganäs plans on replacing fossil coal with renewable biochar made from biomass.

“We replaced 20 percent of the fossil coal we use with biochar for one month, and it worked better than we had hoped. We reduced the process carbon emissions by 17 percent and there were no effects on our process or on the quality of our sponge iron,” says Ryan Robinson, Process Development Engineer at Höganäs.

The biochar needs to be high in density and low in reactivity to work in the process. To get it there, Höganäs built a biochar pre-treatment plant that produced pellets with twice the density of untreated biochar. Pushing the use of biochar beyond 20 percent though, will require structural changes to the 200-meter-long tunnel furnace.

“Switching to 100 percent biochar requires us to adjust the process to maintain the properties and quality of our metal powder. Doing this by 2030 is ambitious but we believe that we can get there by gradually adjusting our process and the amount of biochar we use,” says Pontus Hydén, Director Global Technology at Höganäs.

Sourcing high-quality biochar for the pre-treatment process in sufficient quantities is another challenge, especially if Höganäs’ industry peers are to follow the same decarbonisation route.

“We invited prospective suppliers and our peers to our biochar trial to raise awareness. **By creating demand for high-quality biochar, we encourage supply and create opportunities for other players in the metallurgy industry to replace fossil coal**,” concludes Hydén.

The initiative is financially supported by the Swedish Energy Agency.

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The commitment and engagement shown by our co-workers is inspiring and ensures that we will be successful.

VICE PRESIDENT GROUP SUSTAINABILITY COMMENT

An industry leader on the path to net-zero

Another year has passed and again left us with a renewed sense of urgency to address climate change. 2023 was the warmest year on record, registering temperatures 1.48 degrees Celsius above pre-industrial levels. While the weather phenomenon El Niño certainly played its part, levels of greenhouse gases such as carbon dioxide and methane rose to new record levels.

At COP28 in Dubai, the world's countries reaffirmed their commitments from the Paris Agreement and, for the first time, agreed to "transition away from fossil fuels". That is encouraging and it underscores that net-zero emissions is the direction that industry, technology and society will move in.

Höganäs' strategy recognises this. After all, low or zero emission products such as electric vehicles defeat their own purpose if they are produced with materials from highly emitting processes. That is why we both are developing new products for applications that support climate transition such as electrical vehicles, and following our climate roadmap that will take us to net-zero in our own operations by 2030 and in our value-chain by 2037.

Our progress and ambition make us an industry leader on the path to climate neutrality. In April, we became the first metal powder supplier to have our net-zero targets validated by the Science Based Targets Initiative. With our targets set and a clear strategy, our engineers are doing what they do best, finding solutions for problems. You can read more about our progress in this report, including that we in 2023 decreased our scope 2 emissions.

One critical area where we seem to have stalled and our record is not satisfactory is workplace safety. Our analysis shows that a major cause is our own behaviour which creates an insufficiently strong safety culture. Changing a culture is cumbersome but we are not deterred and have launched several initiatives to ensure that we really do follow our principle 'we work safely – or not at all.'

While climate change is important, sustainability is a much broader subject. This breadth is needed to ensure that while solving one problem, we do not make others worse. During 2023, we have launched three different courses to raise the overall competence level and awareness around sustainability. For us as an organisation to move in the right direction, we as co-workers all need to be equipped with the right knowledge.

Also in 2023, we took the first steps towards implementing the EU's new Corporate Sustainability Reporting Directive (CSRD) and performed a double materiality assessment. The outcome confirmed the importance of topics connected to mitigation of climate change and workplace safety. We also chose to elevate some other workplace related topics such as diversity and inclusion, and workplace conduct to signal our commitment to improving the overall working environment at Höganäs.

It has been a busy year in sustainability, and we are moving forward at a high pace. We will continue to implement CSRD in our reporting; increase our efforts to adapt our offering to demands for a lower carbon footprint and to provide Life Cycle Assessments (LCA) as evidence; and engage more thoroughly with our suppliers on sustainability matters. The commitment and engagement shown by our co-workers is inspiring and ensures that we will be successful and that our future is bright.

Catharina Nordeman
Vice President Group Sustainability, Höganäs AB

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HÖGANÄS » INSIDE

Enabling the hydrogen transition

Gas turbines work on the same compression, combustion, expansion principles as jet engines. Air is compressed and mixed with fuel that is ignited. The heat expands the air which then drives the turbine. On jet engines, the turbine creates thrust, on gas turbines, it drives a generator producing electricity.

To make it more efficient, engineers are trying to increase the temperature difference between the hot and cold side of the process. The larger the difference, the larger the expansion.

"Since the cold side in practice is limited by the ambient temperature, the easiest way to make a gas turbine more efficient is to make the hot side hotter," says Ken Nalwasky, Director OEM accounts at Höganäs.

With turbine blades that can spin at tens of thousands Revolutions Per Minute (RPM), turning up the heat weakens the blades and increases the risks of creep failures and corrosion. Höganäs supplies thermal barrier coatings that protect them.

"Blade performance is often a limiting factor when designing gas turbines. Our thermal barrier coatings in effect cool the blades, enabling engineers to increase the temperature," says Nalwasky.

With the climate transition, fossil natural gas will make way for hydrogen which produces new challenges. Hydrogen burns faster and is more corrosive. As hydrogen increases in the fuel mix, materials optimised for the new conditions need to be introduced.

"Gas turbines complement intermittent renewables well and will play a major role as the grid decarbonises. In close collaboration with the industry, we are developing advanced coatings that will ensure a smooth transition to clean hydrogen," Sophie Zhou, Vice President Business Development, concludes.

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Strategy

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Our market

Höganäs produces metal powders and competes with both other powder suppliers and manufacturing techniques in a wide range of applications. The industry is affected by broad economic trends including the climate transition and the electrification it brings.

METAL POWDER

Powdered metals form the base of powder metallurgy, a broad and versatile range of production techniques that can produce components with tailored properties and complex shapes both cost-efficiently and more sustainably. Benefits include production close to net shape (the final shape) of the component, which reduces the need for post-production processes, lowering yield loss and therefore total costs. Powder metallurgy also produces less waste and is more energy-efficient than other metal working techniques[1].

THE METAL POWDER INDUSTRY

Metal powder manufacturing is a part of the powder metallurgy industry, complementing equipment and tooling manufacturers as suppliers to final component and product producers. A range of processes are employed in producing the powders to give them the desired properties, including solid state reduction, atomising, annealing and mixing. Efficient production and technically advanced products are keys to competitive advantages in the industry.

MARKET TRENDS

In the face of rapid urbanization and the escalating climate crisis, Höganäs is navigating significant market trends. The surging demand for electric vehicles and advancements in 3D printing technology highlight a shift towards more sustainable and advanced manufacturing practices. Höganäs' commitment to high-performance, sustainable metal powder solutions aligns with these global shifts, ensuring its pivotal role in driving the industry forward. This strategic alignment positions Höganäs at the forefront of the industry's evolution.

1) https://www.epma.com/powder-metallurgy-economic-advantages

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Making circular solutions work in aerospace

A two-year project that has proven the technical feasibility of using by-products (excess powder not used in the AM process to form parts) from a customer's Additive Manufacturing process as an input material in Höganäs own production has just been successfully wrapped up.

"We have created a robust upcycling process, which ensures powder qualities matching our demanding requirements," says Ralf Carlström, Vice President of Business Development.

Metal powders used in Additive Manufacturing today are almost solely based on virgin materials. For Höganäs, and for downstream suppliers and end-users, this is a problem due to high greenhouse gas emissions in their production. Closing the loop by increasing the use of by-products can cut emissions drastically.

"Our initial calculations show that this reduces greenhouse gas emission by around 44 percent. And we could perhaps further stretch how much by-product we use. Currently, customers are testing the material, but everybody, be it end-users or customers, we talk to is positive. They understand how important this is for the future," says Deniz Yigit, Vice President of Strategy & Business Development and Head of Ceramics.

Besides solving the technical production challenges and ensuring material performance, the project had to tackle practical problems such as separating and collecting the by-products.

"We guided and supported our customers along the entire process so that the relevant by-products could be easily separated. We took our long experience from conventional Powder Metallurgy and applied its best practises for our Additive Manufacturing powders," says Yigit.

The intended end-users of the material are in the aerospace industry, where demands on components are famously rigorous.

"If we can prove this concept in Aerospace, we have an example that can be applied in other verticals. The added benefit is that the high alloyed materials used in Aerospace are scarce and cover a high share of the embedded greenhouse gas emissions, so there is a strong motivation to use by-products," says Yigit.

"**We had to overcome some challenges and especially demonstrate reliable material performance, and it took a great team effort to do it.** The people at our German facilities in Laufenburg and Goslar, in logistics and transportation, in health and safety, as well as our customers, they all deserve credit," says Carlström.

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Value chain

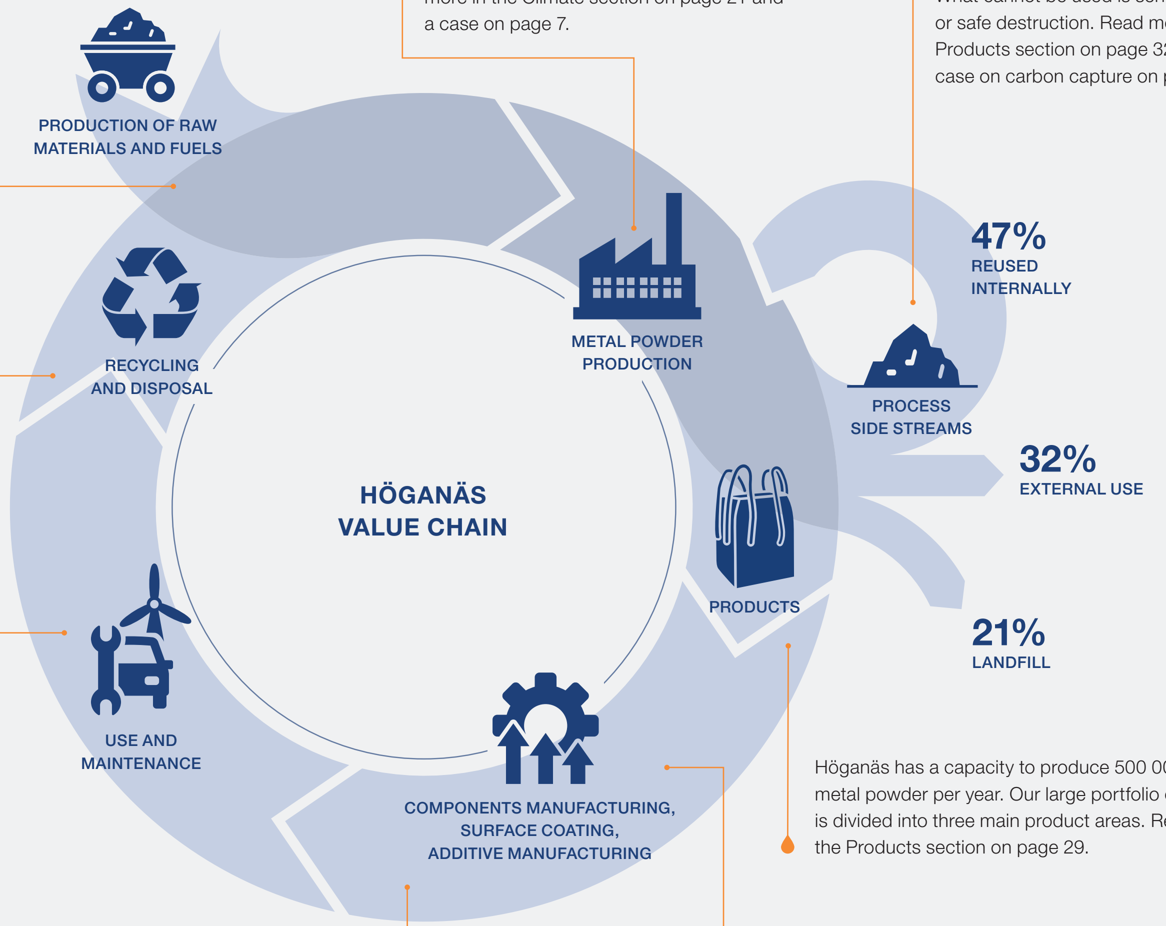
We are committed to reinforcing any positive impact related to our business while reducing the negative impact from activities throughout our value chain. We do this by for example choosing materials and production methods with lower environmental footprint, increasing circularity, and managing health and safety, human rights issues and business ethics.

Our purchases of direct raw materials and process consumables include ferrous and non-ferrous metals, minerals and reduction agents. Read more in the Society section on page 37.

Our five core production processes emit greenhouse gases, mainly as a result of the raw materials and natural gas used. Read more in the Climate section on page 21 and a case on page 7.

Side streams

Process residuals, such as slag and filter dust, are turned into valuable materials that are used internally or as raw materials in other industries. What cannot be used is sent to landfill or safe destruction. Read more in the Products section on page 32 and a case on carbon capture on page 20.



We are pursuing a 'closed-loop' approach by facilitating the utilization of secondary materials, ensuring the recyclability of our products, and reclaiming excess materials from our customers' manufacturing operations. Read a case on circular solutions on page 12.

Metal powders are used in a wide variety of products, such as cars, buses, refrigerators, heating equipment, cutting blades, lifts and loading equipment.

Höganäs has a capacity to produce 500 000 tonnes of metal powder per year. Our large portfolio of products is divided into three main product areas. Read more in the Products section on page 29.

Customers operate in most industries, but are predominately present in the automotive sector, where electrification are upending established supply chains and market positions. See cases on page 12 and 16 for examples of metal powders application.

Höganäs is working closely with customers to develop new products and to incorporate sustainability in the value proposition to end-customers. Read more in the Products section on page 29 and a case on Life Cycle Assessments on page 28.

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Strategic priorities

Our 2030 strategy will position Höganäs as the #1 sustainable metal powder supplier.

The climate transition is the driving force behind the electrification of the automotive industry. To stay relevant in automotive we must become pertinent in electric vehicles with new products and net-zero operations. While managing this transition, we aim to capture growth opportunities within targeted industries and verticals in our Surface Coating and Additive Manufacturing businesses.

We are building on a strong foundation of world leading expertise and efficient operations. By focusing on working closely with our customers, cost management, continued innovation, and a commitment to sustainability, we are ensuring a secure and successful journey towards our 2030 destination.

Sustainability agenda

Höganäs has a broad sustainability agenda that covers important topics grouped in five areas. While climate transition may garner the most attention, other environmental and social issues such as workplace safety and human rights demand equal consideration for us to establish ourselves as a sustainable company in the eyes of ourselves and our stakeholders.

Our materiality assessment serves as the basis for our agenda. It helps us focus our efforts where they matter the most. Read more about the materiality assessment on page 111.

As a preparation for CSRD (Corporate Sustainability Reporting Directive), we performed a double materiality assessment during the year, evaluating both Höganäs' impact on people and planet and the financial effects those impacts are having on Höganäs. The next step is to perform a gap analysis to decide on necessary actions to fulfil the requirements in CSRD. Read more about our sustainability governance on page 112.

CLIMATE

Successfully reducing emissions will enhance Höganäs' relevance as both a supplier and employer. Aligned with our climate roadmap, we are committed to achieving net-zero emissions across our operations and value chain.

SOCIETY

Höganäs is dedicated to maintaining its status as a responsible company. We ensure this by conducting our business ethically, considering the impacts on environment and people when choosing suppliers, paying our taxes and acting as a good neighbour and player in our industry.

ENVIRONMENT

Ensuring the safety of our production facilities and processes, without causing harm to the environment or individuals, is paramount for us. Our aim is that all investments should reduce our climate impact and improve our environmental performance.

WORKPLACE

Being considered an attractive employer is a strength for all businesses. Creating a safe working environment is one important aspect. Other aspects are diversity & inclusion, treating employees fairly and making sure they can develop their skills, capabilities and grow on the job.

PRODUCTS

Sustainability is an important part of the value proposition. We help and guide our customers towards more sustainable solutions and work to minimise waste while moving towards circularity in our own operations.

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HÖGANÄS » **INSIDE**

Looking into the needs of end-customers

ALVIER MECHATRONICS, an engineering company that was founded by Höganäs in 2018, works closely with automotive OEMs and Tier 1's* to develop the next generation of electrical drivetrains.

"We are working in the concept design phase with vehicle platforms that will enter production around 2027–2028. We are also performing development work on electrical drivetrain concepts. This gives us unique insights into the requirements on competitive system solutions and materials in the future," says Daniel Hervén, CEO of Alvier Mechatronics.

The automotive sector is an important end-market for Höganäs, but the company does little direct business with the OEMs. From this perspective, understanding the end-customer needs can pose certain challenges.

"Essentially, we serve as the gateway for Höganäs to understand and meet the future needs of end-customers. While operating as a viable standalone company, we provide Höganäs with material requirements that need to be met for different applications," says Hervén.

Today, the standard for electrical traction motors is laminated steel. Historically this has been the best option for performance and efficiency.

"But performance is only one aspect. A second is cost. A third is sustainability, which is becoming more important. This is true for European, Asian and American OEMs," says Tua Högnäs, Chief Technology Officer Alvier Mechatronics.

Sustainability requirements impacts both the manufacturing and the use phase of the finished car. Already today, motors utilizing Soft Magnetic Composite (SMC) material have a significantly lower CO_2 impact in the manufacturing of motors. With Höganäs' climate roadmap, the carbon footprint will be reduced further in coming years.

In the use (driving) phase, efficiency is important both for sustainability and performance. Increased efficiency will reduce energy consumption over the vehicle's lifetime and add range for a given battery size or, conversely, reduce the battery size for a given range.

"The energy efficiency is very good with silicon carbide for inverter applications and gearboxes that include technologies that have been perfected for 100 years. **The greatest potential for additional efficiency improvement lies in electrical machines especially with the support of new innovative materials,**" says Högnäs.

"Höganäs is now developing materials that target to outperform laminated steel in those applications," concludes Hervén.

*OEM is the original manufacturer of a product or component, in this case cars. A Tier 1 supplier is a direct supplier to the OEM, providing key components that go into the final product.

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Electrification

Höganäs' current business is heavily exposed to automotive and the internal combustion engine. As the world addresses climate change and vehicle fleets become electric, this business will decline. To set our company up for long-term success, we must stay relevant in automotive by becoming relevant in electric vehicles. This is our must-win.

Developing the right materials for applications for the electric vehicle sector will not be enough. Our customers, not only in automotive, are increasingly demanding sustainable practices and improved sustainability performance in their value chains. To stay relevant, we must reach net-zero and become more sustainable in all our operations. This is our can't-lose.

Two target applications

We have identified two main target applications in electric vehicles: transmissions for our traditional powder metallurgy business, and electric motors for our electro magnetic materials business. While focusing on establishing new business in these areas, we must manage the decline in our internal combustion engine business, protecting margins and cashflow to secure the resources we need to arrive safely at our 2030 destination.

Powder Metallurgy (PM)

While most electric cars lack a transmission gearbox, due to the electrical motor's ability to deliver torque over a wide Revolutions Per Minute range, they do have a reduction gearbox. This reduction gearbox reduces the rotation speed of the electrical motor to an appropriate value for the rotation of the wheels. Using powder metallurgy for gears brings several advantages in production consistency, gear performance and in sustainability. The sustainability benefits are estimated through LCA (Life Cycle Assessment) studies, read more on page 28.

Electro Magnetic Materials (EMM)

Soft magnetic composite (SMC) powders enable cost-efficient production of electric traction motors that have both compact design and high performance. We are working closely with OEMs, Tier 1 suppliers, and our partner component manufacturers to establish SMC as an alternative industry standard in parallel to laminated steel for radial and axial flux motors.

Improved sustainability performance

Due to both detailed regulations and the ability to attract consumers and employees, our customers' customers demand that we conduct our business in a sustainable way. In most areas, this does not require us to make drastic changes. We have management systems in place, track our performance and make continuous improvements.

To manage our climate impact though, we must adjust our five main production processes, which in some cases have been developed and perfected for close to 100 years, and find new input materials and apply new technologies. This is a challenge, but we have developed a plan that will take us to net-zero in our own operations by 2030 and in our value chain by 2037.

SEE TABLE ON PAGE 23 for a complete overview of our process emissions and mitigation steps.

Soft magnetic composite (SMC) powders enable cost-efficient production of electric traction motors.

46%

REDUCTION IN SCOPE 1-2 EMISSIONS SINCE 2018

READ MORE ABOUT OUR EMISSIONS ON PAGE 22

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In-depth sustainability information

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Targets and results

The tables summarize our Group targets, the process we made in 2023 and if we are on track to achieve each target.

LOST TIME INJURY FREQUENCY

7.2 (6.9)

PER MILLION HOURS WORKED
TARGET: ZERO ACCIDENTS

SCOPE 1–2, CARBON INTENSITY INDEX

73% (87%)

TARGET: 0% BY 2030
Total tonnes carbon dioxide equivalents divided by total tonnes full values products, indexed to base year 2018

FEMALE CO-WORKERS

17% (17%)

TARGET: 20% FEMALE CO-WORKERS BY 2026

PROCESS RESIDUALS PUT TO USE

79% (74%)

TARGET: 95% BY 2026

SCOPE 3, CARBON INTENSITY INDEX

99% (94%)

TARGET: 70% BY 2030
Total tonnes carbon dioxide equivalents divided by total tonnes full values products, indexed to base year 2018

KEY SUPPLIERS' APPROVAL

78% (82%)

KEY SUPPLIERS RATED AS "GOOD" OR "EXCELLENT"
TARGET: 100% BY 2026

On track   Concern   Deviation

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HÖGANÄS INSIDE

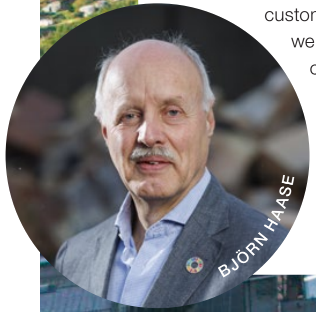
Carbon capture is a great use for slag

Besides producing metal powder, Höganäs in Sweden also produces side stream products of which 75 percent are different slags, stone-like materials that are essential in the metal powder-making process.

"Slag is needed to give the molten steel the right properties. It also acts as a heat insulator for the molten metal and protects the furnace," says Björn Haase, manager Non-metal products at Höganäs.

Our slag can be used for almost everything that stone is used for, and some of Höganäs' slags are used in infrastructure projects such as road construction. Finding uses for the side stream products and reducing what is sent to landfill are ongoing activities at Höganäs.

"I avoid using the word waste, unless we are unable to find use for our side stream products. For instance, all our slags are products registered under the EU's REACH regulation. One of our largest customers now is a stone wool insulation manufacturer and we are always in search of other uses, such as carbon capture. Since we use lime as slag former and it has a high capacity to capture CO_2, we believe it is a great match," says Haase.



The carbon capture process where slag can be used is called carbonatation. It is when carbon dioxide reacts naturally with alkaline materials. In the case of lime, it reacts and forms calcium carbonate, which is the same as natural limestone. RISE, the Research Institutes of Sweden, is doing research on how to use industrial residual materials, such as slags or similar materials, in processes that can capture carbon dioxide at scale.

"There are many questions to answer. Does the slag need to be processed in some way to do a better job? Where should the carbon capture process take place? At the source where the concentration of CO_2 is high or somewhere else? RISE is now looking to build a mobile test facility to answer these questions by testing different materials at different locations," says Haase.

The materials formed in the carbonatation process, are chemically stable and the aim is to define useful applications for them extending the process from the carbon capture to carbon capture and utilisation. Several of Höganäs' current customers see this as an added benefit.

"No one can see any real impact from the carbonatation on how they use our materials. It does not make any noticeable differences in their processes. **But it would be a boom for the climate if we can add this step,"** says Haase.

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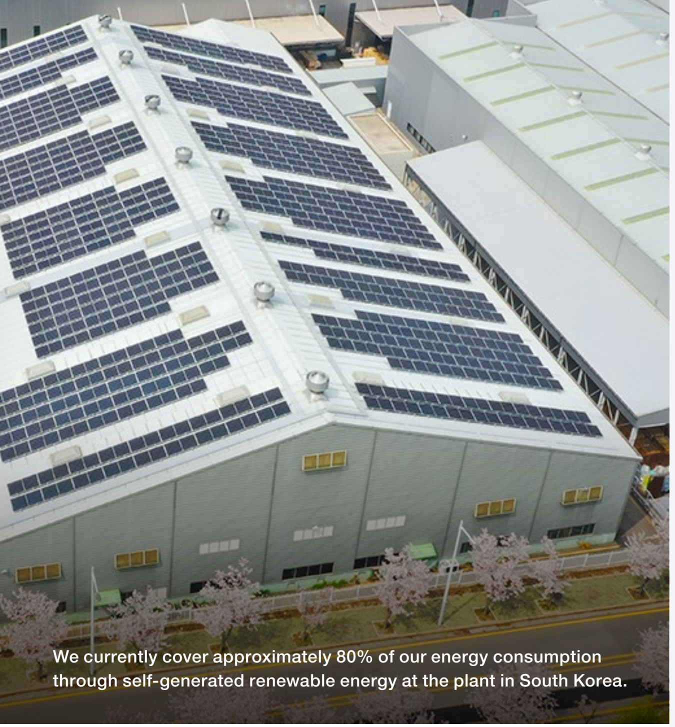

We currently cover approximately 80% of our energy consumption through self-generated renewable energy at the plant in South Korea.

OUR OBJECTIVES

SDG 7-2
Increasing use of fossil-free electricity and renewable fuels (Höganäs Climate Roadmap).

SDG 7-3
Reducing emissions through energy efficiency (Höganäs Climate Roadmap).

SDG 13-2
The Höganäs Climate Roadmap.

SDG 13-3
Höganäs' internal work to increase competence and capability, and the work in our sphere of influence, such as supply chain, customers and other stakeholders in society.

Climate

Climate change is one of the most pressing sustainability challenges for humanity.

Considering the carbon intensity and the direct greenhouse gas emissions from our own operations, climate change is consequently our main focus area. Indirect emissions across our value chain – connected to the production of metals and minerals – are also important and contribute to Höganäs impact.

Failing to reduce the carbon intensity of our operations emissions would result in a loss of credibility and in Höganäs being perceived as less relevant for a sustainable society.

Our targets and ambitions

Our ambitions are to reach net-zero in our own operations (scope 1 and 2) by 2030 and in our value chain (scope 3) by 2037. This goes beyond our Science Based Net-Zero Targets that were validated in April 2023, which aim for net-zero across our value chain by 2040 and includes both near- (2030) and long-term (2040) absolute reduction targets[1].

Our climate roadmap

Our climate roadmap is our strategic plan for delivering on our net-zero ambitions. For scope 1 and 2, four main pathways have been identified to reduce emissions: replacing fossil-based coke and anthracite with biochar; replace natural gas with biogas, other fossil fuels with biofuels and electrify where appropriate; buy fossil-free electricity; and enhance energy efficiency. To get all the way to net-zero, permanent removal technologies such as carbon capture and storage (CCS) need to be deployed for the remaining emissions from our production processes. Local action plans that will bring us to a 90 percent reduction have been developed and are currently being implemented with progress tracked and followed up regularly. An important project is the use of biochar as a reducing agent in the sponge iron process. Successful full-scale tests were carried out in 2023 and development will continue in 2024.

For scope 3, there are three main pathways: increase the use of secondary materials; choose raw materials produced with a lower carbon footprint; and move over to raw materials with inherently lower carbon footprint. To make headway, we are reaching out to suppliers and customers. When switching to materials, determining the technical feasibility in our own processes is only halfway there. Materials with the right properties need to be sourced in sufficient quantities from suppliers and changes need to be approved by customers. End-users in some industries, such as aerospace, automotive, or medical technology, may demand that products need to be requalified if input materials are changed. Succeeding will therefore require close cooperation upstream- and downstream the value chain.

TOPICS COVERED IN THIS SECTION

- GHG (Greenhouse Gas) emissions scope 1 and 2
- GHG emissions scope 3
- Fossil-free energy and process materials
- Permanent removals
- Transportation

Following our double materiality assessment (read more on page 111) our material topics may be modified in coming reports.

1) SBT near-term: Höganäs commits to reduce absolute scope 1 and 2 GHG emissions 51% by 2030 from a 2018 base year. Höganäs also commits to reduce absolute scope 3 GHG emissions from purchased goods and services, upstream transportation and distribution, and business travel 30% within the same timeframe. Long-term: Höganäs commits to reduce absolute scope 1, 2 and 3 GHG emissions 90% by 2040 from a 2018 base year. Both near- and long-term target boundary includes land-related emissions and removals from bioenergy feedstocks.

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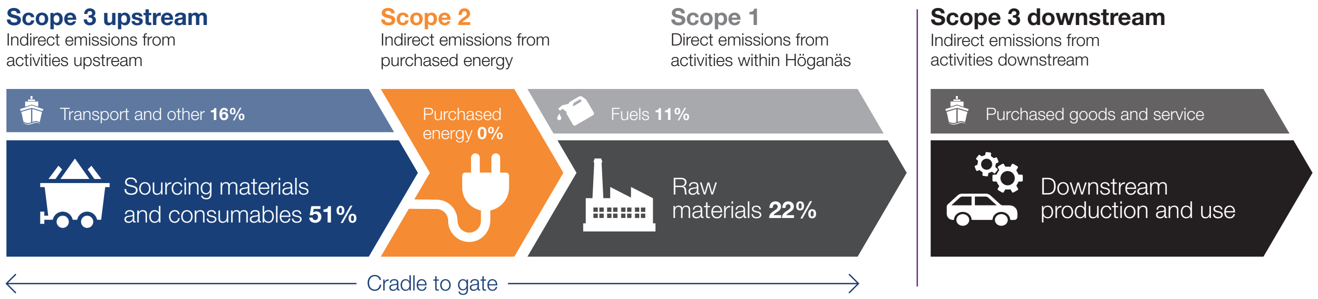
Beginning in 2024, we will systematically reach out to 25 suppliers per year to initiate in-depth dialogues on sustainability performance, of which our scope 3 emissions is an important part. Other relevant sustainability considerations, such as working conditions and human rights, will naturally be included. Within a three-year timeframe, we anticipate having addressed the majority of our upstream scope 3 emissions from direct materials.

Other areas where there are systematic efforts to contribute to lowering greenhouse gas emissions are energy efficiency and transport.



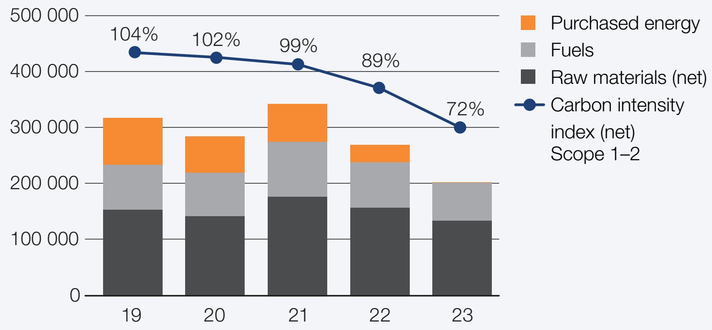
At Höganäs we have five core processes to produce our range of metal powders. Our processes result in carbon dioxide emissions both directly and indirectly that mostly stem from the raw materials used. See the next section Our processes for more information. Our remaining emissions come from fuels, which are mainly used to produce industrial heat, and from transports.

Direct emissions, Scope 1, tonnes CO_2e	2023	2022	2021	2020	2019	2018
Emissions from fuels	68,000	80,800	97,600	77,400	79,700	91,700
Carbon in raw materials	147,600	172,000	192,200	154,000	166,300	194,600
– Carbon in waste	–9,300	–12,500	–10,700	–10,300	–10,500	–14,100
– Carbon in side-stream materials	–3,800	–1,100	–3,800	–1,100	–1,200	–1,300
– Carbon in products	–100	–100	–100	–100	–100	–100
Total emissions (Scope 1, fuels and raw materials)	**202,400**	**239,100**	**275,200**	**219,900**	**234,200**	**270,800**
Emissions from biogenic fuels	**900**	**500**	**200**	**700**	**900**	**600**
Emissions from biogenic raw materials	**1,400**					

Indirect emissions from purchased energy, Scope 2, tonnes CO_2e	2023	2022	2021	2020	2019	2018
Market based (own choices)	900	30,600	67,900	65,200	84,400	103,500
Location-based (residual mix)	87,300	84,900	90,000	92,500	112,700	141,400
CO_2 emissions not emitted by choosing fossil free energy (compared to location-based emissions)	86,400	54,300	22,100	27,300	28,300	37,800
Total emissions (Scope 1 and 2)	**203,300**	**269,700**	**343,100**	**285,100**	**318,600**	**374,300**

Comments on outcome: Total CO_2 emissions in scope 1 and 2 decreased by 46 percent since 2018 (tonnes). Carbon intensity index decreased to 72 percent in 2023 compared to 89 percent previous year (base year 2018). Reduction in scope 2 is due to 100 percent fossil-free electricity 2023, increased own production of renewable energy (32 percent, incl. sold), and electricity with guarantees of origin. Electrification, increased use of biofuels, and more efficient energy utilisation in our production processes contribute. A number of extra ordinary events during the year, such as product mix with less scope 1 impact, inventory reductions and full-scale biochar test, has lowered the emissions in scope 1 more than anticipated corresponding to approximately 17,000 tonnes. With those events taken into account the carbon intensity index would be 78 percent for 2023.

GHG emissions scope 1 and 2, tonnes CO_2



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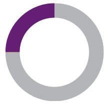
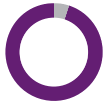
Indirect emissions from upstream activities, Scope 3, tonnes CO_2e	2023	2022	2021	2020	2019[1]	2018[1]
1. Purchased goods and services	318,600	334,300	413,500	342,900	377,400	436,600
3. Fuel & energy related activities	36,700	32,700	42,600	45,800	28,700	35,600
4. Upstream transportation	38,100	43,500	55,700	42,800	43,500	50,000
6. Business travel	1,600	1,500	1,600	1,600	1,700	6,100
Categories 2, 5 and 7[2]	24,900	19,600	16,000	14,900	21,800	35,100
Total Scope 3, upstream	**419,900**	**431,600**	**529,400**	**448,000**	**473,100**	**563,400**
Total emissions (Scope 1, 2 and 3)	**623,200**	**701,300**	**872,500**	**733,100**	**791,700**	**937,700**

1) Scope 3 emissions for 2018 and 2019 are estimated for our facilities in Germany, Laufenburg and Goslar.
2) 2. Capital Goods, 5. Waste generated in operations, 7. Employee Commuting.

OUR PROCESSES

Relative emissions per scope	Core process	Sources of emissions	Mitigation activities, Scope 1	Mitigation activities, Scope 2 and 3
	**Sponge iron**	High direct emissions from metallurgical coke, anthracite, and natural gas. Some emissions from other process materials such as slag formers	Use of biochar as a reduction agent and biogas. Permanent carbon removal for remaining emissions from raw materials.	Fossil-free electricity. Lowered upstream emissions from input materials.
	**Iron powder atomising**	High indirect emissions from alloying elements and primary raw materials. Direct emissions from slag formers, fossil anthracite, natural gas and electrodes.	Use of biochar and biogas. Permanent carbon removal for the remaining emissions from raw materials.	Fossil-free electricity. Increased use of secondary iron and use of alloying elements with lower carbon footprint.
	**Iron powder annealing**	Indirect emissions from upstream processes and alloying elements. Direct emissions from natural gas for process heating and furnace atmosphere	Use of biogas, electrification or plasma heating.	Fossil-free electricity. Lowered emissions from upstream processes and alloying elements.
	**Iron powder mixing**	Indirect emissions due to alloying elements and additives.	No direct emissions.	Fossil-free electricity. Lowered emissions from upstream processes, alloying elements, and additives.
	**High alloy atomising**	High indirect emissions due to refined raw materials and use of electricity. Direct emissions from natural gas.	Electrification, energy efficiency and bio-based fuels.	Fossil-free electricity. Increased use of secondary high-alloy materials. Lowered emissions from upstream processes and alloying elements.

■ Scope 1 ■ Scope 2 ■ Scope 3

The overall reduction in scope 3 is 25 percent since 2018. Scope 3 emissions in the largest category, Purchased goods and services, consists mainly of emissions related to the production of the raw material we use. Efforts are being made to shift from primary materials to secondary materials whenever possible. Emissions from purchased goods and services have decreased mainly due to lower production volumes; –5 percent compared to 2022 and –27 percent compared to 2018. By applying supplier specific emission factors for a few raw materials, we have decreased the overall CO_2 emissions in category 1 by 3 percent. For the raw materials in question the decrease is 81 percent.

Fuel and energy related activities has increased with 12 percent compared to 2022 and 3 percent compared to 2018. The fluctuations between years correlates to the yearly produced volumes and difference in emission factors between years, 2023 was also influenced by reduced inventory.

The decrease in emissions from Upstream transportation is also mainly related to lower production volumes; –12 percent compared to 2022 and –24 percent compared to 2018.

The increase in emissions from Business travel may be due to starting to return more to the normal levels before Covid, but we still see a decrease overall from 2018.

The categories Waste generated in operations, Capital Goods, and Employee commuting are labelled as Categories 2, 5, and 7. The increase for categories 2, 5 and 7 is mainly due to higher investments during 2023.

The calculation method for the part of 'Purchased Goods & Services' that is based on spend (~20 percent of this category) was improved in 2023 by applying DEFRA emission factors on a more granular level of subcategories. Historical data was recalculated.

The nature of the emissions from our core processes, and mitigation activities for scope 1, 2 and 3.

The graphs in the far-left column show the relative contribution from each scope. Important features are the relatively large dependence on scope 1 in the sponge process, of scope 3 in the iron powder mixing process and high alloy atomization, and from scope 1 and 3 in the water atomization and annealing processes.

The contribution from scope 2 is considered as zero from 2023 and onward as 100 percent of the purchased electricity is fossil free or renewable.

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Energy use within the organisation, MWh	2023	2022	2021	2020	2019	2018
Non-renewable fuels	339,900	410,900	495,200	392,600	405,700	464,200
Renewable fuels	27,700	1,900	700	4,000	5,100	2,600
Total energy use from fuels	**367,600**	**412,800**	**495,900**	**396,600**	**410,800**	**466,800**
Purchased electricity, residual mix	0	108,100	210,800	176,400	208,100	249,400
Purchased electricity from partly renewable sources	0	192,900	230,200	214,400	237,800	281,200
Purchased electricity, renewable	95,300	124,200	46,600	20,700	25,300	28,500
Purchased electricity, fossil free	300,600					
Purchased heat, steam or cooling	6,700	4,300	5,800	6,900	5,600	4,100
Total purchased energy	**402,600**	**429,500**	**493,400**	**418,400**	**476,800**	**563,200**
Self-generated energy from renewable sources	3,500	3 700	600	500	200	100
Total energy use	**773,700**	**846,000**	**989,900**	**815,500**	**887,800**	**1 030,100**

Comments on outcome: Total energy consumption was 9 percent lower compared to previous year mainly due to decreased production volumes and process optimisation. The energy consumption per produced tonne (energy intensity) is 1 percent lower compared to last year. Efforts to increase energy efficiency will continue to be a focus area within production in the years to come.

Energy use

Our energy use consists of fuels and electricity. The fossil fuels we use are natural gas (for industrial heat in our core processes and hydrogen production), liquified petroleum gas (LPG), diesel and petrol. We also use some biofuels for our vehicles and biogas in the production.

Energy efficiency is prioritised in all our operations and our target is to become one percent more energy efficient each year. In 2023, we became 1 percent more efficient. All sites work systematically with energy efficiency as part of management systems certified according to ISO 14001 and six out of ten energy intensive sites are also certified also according to ISO 50001.

Our target to use 100 percent fossil-free electricity by 2024 across all our production sites was reached during 2023 by purchasing fossil-free electricity with Guarantees of Origin (GoO), through Power Purchase Agreements (PPAs) and by investing in our own production of renewable electricity.

Residual heat from our production in Sweden is put to use, by being delivered to external parties such as district heating. In 2023, 45 395 MWh of surplus heat was delivered to the Swedish cities Halmstad and Höganäs. Our sites in Ath, Belgium, and Busan, South Korea, sell surplus electricity from their solar parks.

Permanent removals

Höganäs investigates opportunities and monitors the development and applicability of CCS (Carbon Capture and Storage). We are also investigating how we can use slags from our own operations to capture carbon. See case on page 20.

Self-generated energy from renewable sources has increased significantly since 2018. A solar park was constructed in 2021 on land adjacent to Höganäs' factory in Ath, Belgium, with in total 17,532 solar panels that generate around 5,500 MWh of electricity. This output is equivalent to about 20 percent of Höganäs in Ath's total energy needs. The field continues to be grazed by sheep.

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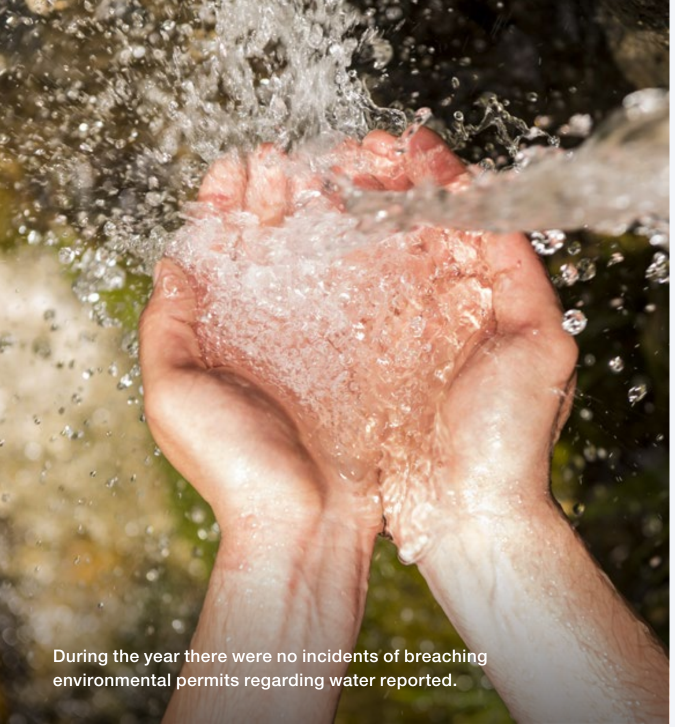

During the year there were no incidents of breaching environmental permits regarding water reported.

Environment

Höganäs’ activities contribute to environmental impact throughout the value chain. The impact to air, soil and water is considered limited in our own operations but could be significant across the value chain due to the use of raw materials coming from extractive industries.

Failing to manage these issues poses risks, including reputational, loss of trust from authorities and society, loss of business and difficulties in recruiting while indirectly compounding climate change and violating human rights.

Mitigating environmental impact

We seek to minimise our negative impact by applying the precautionary principle, using the best available technologies, and creating stable processes. Long-term, our objective goes beyond minimising harm to contributing to building ecosystem resilience.

All production sites have environmental management systems and are, except for three smaller units, third-party certified according to the ISO 14001 standard. In addition, all sites are subject to authority control and have obtained the necessary environmental permits. The permits required differ between countries, but all are renewed at fixed intervals. Höganäs regards them as minimum requirements for environmental management.

Stable processes are essential for avoiding unplanned production stops that may result in increased emissions, spills or leakages. The systematic work we perform to maintain our processes include:

- Daily routine maintenance conducted by operators.
- Scheduled maintenance by local teams.
- A ‘Loss Prevention Manual’ where loss prevention and risk management procedures are outlined as part of the overall management system.
- Comprehensive risk analyses concerning molten metal and reactive chemicals for each type of chemical and piece of equipment being used.

Chemicals are used on site only after being approved through internal risk assessments. The process includes publishing safety data sheets on Höganäs’ intranet and conducting necessary training of users. Regular inventory of chemicals is conducted as part of our internal audit programme. We have procedures in place to replace chemicals with less harmful alternatives.

In 2023, no cases of environmental non-compliances were reported.

Air emissions

Air emissions are calculated based on local monitoring carried out to cover the needs for function control and compliance with environmental permit limits. As a result, not all sites report on all substances and the consolidated figures may therefore not cover all actual emissions.

TOPICS COVERED IN THIS SECTION

- Emissions to air and soil
- Water use and discharges
- Biodiversity
- Use of chemicals

Following our updated double materiality assessment (read more on page 111) our material topics may be modified in coming reports.

OUR OBJECTIVES

SDG 6-4
Monitoring water intensity and striving to promote water efficiency and avoiding the use of freshwater at local level.

SDG 9-4
Continuously upgrading and optimising equipment at local level.

SDG 12-4
Resource efficiency and zero waste, responsible sourcing and process safety management.

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Air emissions, tonnes	2023	2022	2021	2020	2019	2018
Nitrogen oxides (NOx)	110	120	120	100	120	120
Sulphur oxides (SOx)	30	40	30	30	40	40
Carbon monoxide (CO)	130	150	140	100	120	140
Non-methane volatile organic compounds (NMVOC)	10	10	10	8	8	9
Ammonia (NH3)	<1	<1	<1	<1	<1	<1

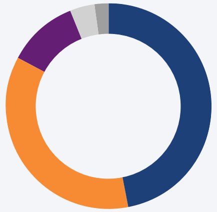
Metal and dust emissions to air, kg	2023	2022	2021	2020	2019	2018
Iron (Fe)	6,770	6,960	8,680	8,500	9,800	11,570
Chromium (Cr)	7,080	7,270	7,630	6,500	7,600	9,000
Zinc (Zn)	1,660	1,280	1,170	1,400	1,100	1,500
Nickel (Ni)	560	610	680	500	600	100
Copper (Cu)	90	100	90	70	80	60
Lead (Pb)	70	70	60	60	70	70
Cadmium (Cd)	10	10	10	10	10	10
Mercury (Hg)	5	5	2	2	2	2
Total dust, including metals to air, tonnes	63	64	68	60	60	80
PM10, tonnes	36	36	39	30	40	50
Arsenic (As)	2	2	1	1	1	1
Cobalt (Co)	10	10	20	10	10	0
Hazardous air pollutants (HAP), tonnes	7.7	8.0	8.4			

Comments on outcome: Emissions to air are stable within normal variations. An increase of zinc emissions can be seen in our plant in Höganäs, Sweden and investigation is ongoing to find root cause.

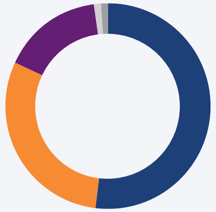
Water withdrawal, CBM	2023	2022	2021	2020	2019	2018
Total volume of water withdrawn	7,200	7,700	8,300	6,300	6,800	6,300
– of which seawater	3,400	3,300	4,400	3,800	4,100	4,200
– of which freshwater	3,800	4,400	3,900	2,500	2,700	2,100
Total water discharges	6,500	6,900	7,600	5,700	6,200	5,600
Total water consumption	**700**	**800**	**700**	**600**	**600**	**700**

Comments on outcome: Water withdrawal has been at a higher level over the last three years, mainly due to more precise monitoring of water flows.

WATER WITHDRAWAL BY SOURCE



WATER DISCHARGE BY DESTINATION



Air emissions include both stack and fugitive emissions. To minimise stack emissions, all large point sources are equipped with filters. Local environmental control programmes typically include monitoring emissions such as nitrogen oxides (NOx), sulphur oxides (SOx), metals residues and other substances of concern, depending on the type of process.

To prevent fugitive emissions, raw materials and products (metal powders) are handled in closed processes when possible. Slag handling though, including sorting and transporting to internal landfills, is generally carried out in open air with precautions to reduce dust, such as watering, at all slag production sites.

Water use

We use water for cooling, atomisation, dust binding and slag quenching. The single largest water use is cooling, for which we mainly use seawater, in closed systems through heat exchange. The water is largely circulated many times before being returned in the same condition as it was taken.

In the atomisation process, water is used to atomise molten steel in a controlled water jet process. The water is treated, cooled and mostly recycled within the process.

Water for dust binding and slag quenching is evaporated, treated on site, or sent to external water treatment plants.

Our production sites are located in areas with relatively stable fresh water supplies. The exception is our site in Ahmednagar, India, where seasonal fluctuations cause water stress such as flooding and drought. We acknowledge that climate change and changing weather patterns calls for regular assessment of the freshwater situation so that we can act swiftly on signs of water stress.

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Discharges of substances to water, kg	2023	2022	2021	2020	2019	2018
COD (Chemical Oxygen Demand)	9,690	10,330	8,040	7,650	10,770	9,230
O&G (Oil and grease)	370	500	430	350	700	170
N-tot (Nitric nutrients)	330	370	380	270	390	380
TS (Total Solids (TSS+TDS))	3,420	6,550	6,470	8,140	4,630	5,370

Metal discharges to water, kg	2023	2022	2021	2020	2019	2018
Iron (Fe)	940	2,140	1,030	550	460	600
Zinc (Zn)	60	100	110	70	130	290
Nickel (Ni)	20	60	60	110	50	90
Copper (Cu)	60	70	50	10	20	20
Chromium (Cr)	10	20	20	50	20	20
Lead (Pb)	10	10	10	10	10	2
Cobalt (Co)	10	10	4	20	20	1
Arsenic (As)	2	1	1	1	2	< 1
Cadmium (Cd)	1	1	< 1	< 1	< 1	< 1
Mercury (Hg)	0	0	<1	<1	<1	<1
Molybdenum (Mo)	20	20	20	30	50	90

Comments on outcome: Total water discharges are calculated on local monitoring results based on site specific circumstances and demands for compliance to environmental permit limits. As a result, not all sites report on all substances and the consolidated figures may therefore not cover all actual discharges. Normal variations occur due to changes in water flows. The decrease of iron in the water discharges compared to previous year is due to the installation of a new wastewater treatment tank at our facility in Stony Creek, US.

Water discharge

Most water is uncontaminated cooling water that is circulated many times prior to discharge. Contaminated water is treated in wastewater facilities operated by either Höganäs or a third party to meet environmental quality standards before being discharged.

We monitor discharges of metals into the water and measure other substances of concern according to our control programmes and local environmental permits. As a result, not all sites report on all substances and the consolidated figures may therefore not cover all actual discharges. In many cases monitored substances are below the detection limits. The significant iron increase in recent years is explained by more exact monitoring methods at our facility in Stony Creek, US.

During the year there were no incidents of breaching environmental permits regarding water reported.

Ecosystems services and biodiversity

To avoid significant depletion of our nearby ecosystems, a work is initiated to identify the most important ecosystem services and learn how we can monitor them. One promising technique is remote sensing using satellite photos. A project in the facility in Höganäs, Sweden in 2023, that evaluated our biodiversity work at the site using historical data from satellite images, confirmed its feasibility. The results showed no major adverse impact on biodiversity around the site. We see possibilities to use it to roll out this type of monitoring, first to our global sites and later to our suppliers.

Höganäs took extensive measures when sand martins (Riparia riparia) nested in a sand pile on the company's industrial site in Höganäs, Sweden. To avoid disturbing the sand martins during the breeding season, a section of the industrial area was closed off. In 2024, the sand pile will be relocated to an undisturbed area and managed in a way that benefits the birds.

Höganäs took extensive measures when sand martins nested in a sand pile at the industrial site in Höganäs, Sweden.

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Promoting supply chain cooperation through a life cycle perspective

Somaloy is Höganäs' trademark for Soft Magnetic Composites (SMC), powders developed for the manufacture of high-performing electromagnetic applications, such as traction motors for electric vehicles. The Somaloy 5P product family was the first to have its carbon footprint verified by a third-party.[1]

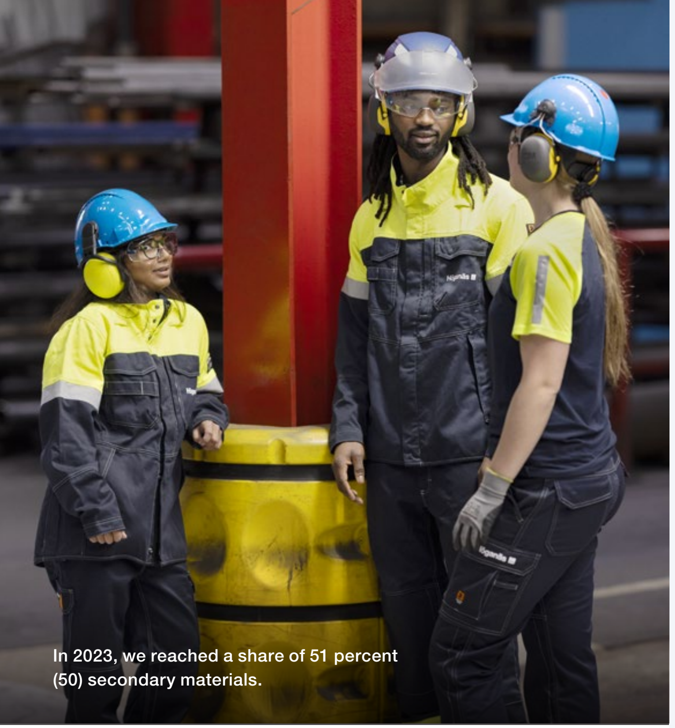
"Carbon footprint data is increasingly requested by customers. The third-party verification demonstrates that our data are credible, following well established methodologies," says Sofia Poulikidou, Life Cycle Assessment specialist at Group Sustainability at Höganäs.

Climate transition is the key driver for our customers. Electric drivetrains will not be enough for the automotive industry to secure its future, it also needs to cut emissions in the manufacturing process.

Höganäs is now working to offer carbon footprints for a broader range of products as product specific environmental impact data is becoming the new norm within the industry. The company is also working on more comprehensive Life Cycle Assessments that include a wider range of sustainability metrics and environmental impact data.

"A life cycle perspective brings us closer to our suppliers and customers and promotes collaboration in making the value chain sustainable. Our customers can use our data to meet demands from their customers but also to improve their own products and processes and lower their impact," says Poulikidou.

1) The assessment followed the ISO 14067:2018 carbon footprint standard and was in accordance with International Standards on Life Cycle Assessment – ISO 14040 and ISO 14044.



In 2023, we reached a share of 51 percent (50) secondary materials.

Products

Our products contribute to both positive and negative impact downstream in our value chain. The scale and scope of the negative impact downstream depend on the application and on to what extent downstream customers minimise their negative impact.

By focusing on how to best solve our customers' challenges through products that are circular, resource and energy efficient, and adapted to a low carbon society, we can create a positive impact. Failing to create a demand for more sustainable products, will mean missing out on business opportunities and slowing down the transformation overall in our industry.

Sustainable product development

Our products have many inherent benefits. For example, powder metallurgy has a higher raw material utilisation and lower energy requirement per kilogram of finished part compared with other production techniques, such as forging and machining.[1] Powder-based metal surface coatings can increase the lifespan and performance of products by improving resistance to heat, wear and corrosion.

We are striving to further improve these benefits throughout the value chain by working closely with and offering application development support to customers, lowering the climate impact from our production processes and creating circular material flows. Being close to our customers and understanding the sustainability requirements of their end-users has also been identified as important.

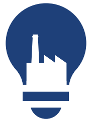
To realise our principles for sustainable product development, three key enablers have been identified:

1. **Conscious material selection,** where insights about the environmental impacts and sustainability requirements across the full life cycle are utilised.
2. **Market transformation**, where foresight into sustainability driven changes guides what we focus on developing.
3. **Constructive partnerships**, where our relationships with customers, suppliers and other actors are organized around what is needed to achieve our objectives.

1) https://www.epma.com/powder-metallurgy-economic-advantages

Our principles for sustainable products are based on a life cycle perspective in order to fulfil four key pillars below.

Net-zero emissions
Eliminate dependence on fossil carbon sources and move towards net-zero emissions.



Resource productive
Efficient and effective solutions creating value for industry and society.

Circular
Enable circular material flows throughout the value chain.

Safe and ethical
Cause no harm to people or the environment throughout the value chain.

TOPICS COVERED IN THIS SECTION

- Customer relations and partnerships
- Circular economy
- Material use

Following our updated double materiality assessment (read more on page 111) our material topics may be updated in coming reports.

OUR OBJECTIVES

SDG 8-4
Resource efficiency and zero waste, responsible sourcing and process safety management.

SDG 12-2
Responsible sourcing.
Principles for sustainable products.

SDG 12-5
Resource efficiency and zero waste.

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The principles for sustainable products are used in our development process. A sustainability assessment is part of the start-up of all new pre-studies and projects for both product and process development, as well as in investment pre-studies and projects. Nine such assessments were performed during the year.

These principles are also applied by our product areas on their product portfolio to increase knowledge, identify business opportunities and clarify the direction for the development of new products, as well as further improve existing products from a full life cycle perspective.

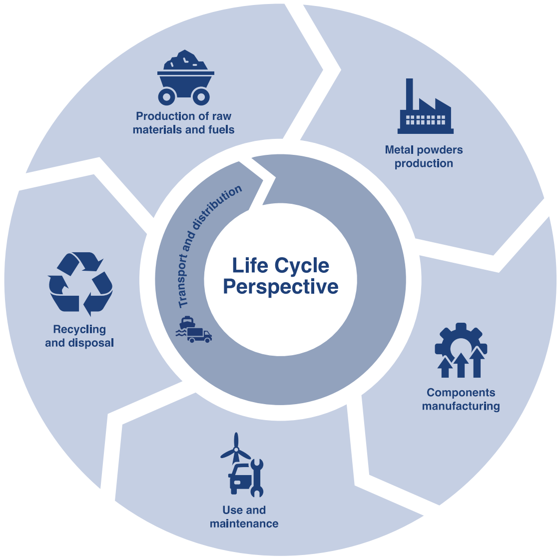
Product labelling

All products that Höganäs puts on the market or transports between markets are accompanied by a Materials Safety Data Sheet (MSDS), also known as a Safety Data Sheet (SDS). An MSDS is a factsheet developed by manufacturers describing the chemical properties of a product including brand-specific information such as physical data (for example solid, liquid, colour, melting point, flash point), health effects, first aid, reactivity, storage, handling, disposal, personal protection, and spill/leak procedures.

Höganäs MSDSs are available in the most common local languages used in the different geographical markets. All transport containers are marked according to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) together with other required transport documentation.

No case of non-compliance has been identified with either product and service information and labelling or marketing communications.

Requirements for product and service information and labelling	Required for product/service labeling
The sourcing of components of the product or service	Yes
Content, particularly with regard to substances that might produce an environmental or social impact	Yes
Safe use of the product or service	Yes
Disposal of the product and environmental or social impacts	Yes
Other	No
Percentage of significant product or service categories covered by and assessed for compliance with such procedures	100%



LIFE CYCLE ASSESSMENT

We provide high-quality sustainability data on our products, including carbon footprint, that have been compiled using the Life Cycle Assessment (LCA) method. We have adopted a holistic LCA perspective within our organisation, starting with our raw materials and the energy needed to drive our processes, to the output of products, side-streams and waste. Our work with LCA tracks a high number of indicators to give an accurate and transparent description of our products' environmental footprint.

Initially, our LCA activities have focused on products produced at our sites in Höganäs and Halmstad in Sweden and in Laufenburg in Germany. Detailed and site specific LCA models have been developed using a commercial LCA software and with support from consultants with a long experience on LCAs within the steel sector. The models are also reviewed by an independent external party to ensure quality and consistency. We have developed a plan for covering all our sites up to 2026. In 2024, we will continue to cover core processes and prioritised products produced at our sites in Sweden, Germany, India and the US. We also put the foundations for a systematic way of conducting LCAs in Höganäs to ensure harmonization across the sites and LCA practitioners.

We have approached customers such as automotive component manufacturers to collaborate on LCAs. This extends our cradle-to-gate LCAs beyond our gate to also include data on our customers application of products. Our current ambition is to conduct two customer projects per year.

We are expanding the LCA team to meet both current and projected demand for LCA related data. During the year, a manager for the team was hired and an additional LCA engineer will be hired in 2024.

The LCAs are complemented by the qualitative sustainability assessments mentioned in the Sustainable product development section.

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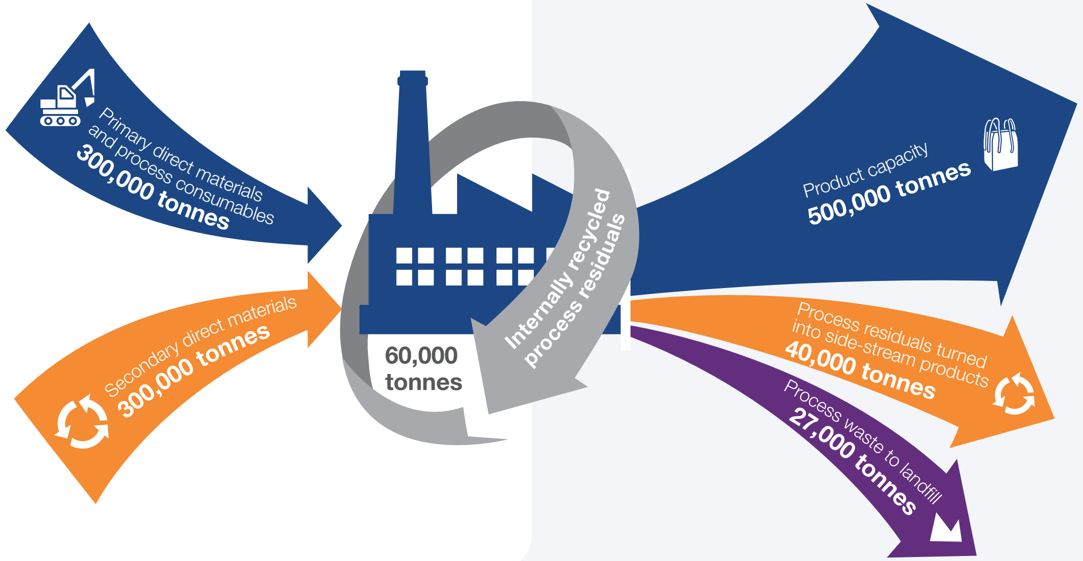
MATERIAL USE

In 2023, we directly handled 600,000 (622,000) tonnes of materials.

The primary raw materials used were extracted from the earth's crust and have a large environmental impact. These materials are mainly iron ore, limestone and fossil process coal or coke.

Using secondary or recycled materials limits the negative impact on the environment and our ambition is to use more of such materials. In 2023, we reached a share of 51 percent (50) secondary materials. The extent of secondary materials used depend on the process. In some processes the share is as high as 95–99 percent.

Packaging materials consist of 94 percent plastics such as flex bags and pallets. In recent years, we have switched from wooden pallets to plastic or metal pallets at several sites. Plastic or metal pallets last longer and can also be recycled at their end of life, which reduces waste.



Raw materials, tonnes	2023	2022	2021	2020	2019	2018
Secondary materials, metal scrap	304,000	314,000	332,000	267,000	294,000	359,000
Ferrous and ferroalloys	159,000	185,000	242,000	191,000	222,000	248,000
Graphites, coke and anthracites	47,000	53,000	65,000	46,000	55,000	59,000
Slagforming agents and minerals	25,000	28,000	33,000	26,000	29,000	36,000
Non-Ferrous metals	12,000	12,000	15,000	12,000	12,000	13,000
Organic	2,000	2,000	3,000	3,000	3,000	4,000
Processing gases	51,000	28,000				
Total	**600,000**	**622,000**	**690,000**	**545,000**	**615,000**	**719,000**
Part secondary materials, %	51	50	48	49		

Packaging materials, tonnes	2023	2022	2021	2020	2019	2018
Cardboard & paper	30	20	50	30	130	170
Metal & fiber	120	150	180	220	190	220
Plastic	2,410	2,910	2,720	2,100	1,840	1,950
Total	**2,560**	**3,080**	**2,950**	**2,350**	**2,160**	**2,340**

Comments on outcome: The fluctuations over the years are mostly related to our production volumes and production mixes. Process gases from our facility in Johnstown are included from 2023 which explains the 82 percent increase compared to 2022.

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Process residuals, tonnes	2023	2022	2021	2020	2019	2018
Process residuals directed to disposal (Waste)						
– to external landfill (98% non-hazardous)	7,200	11,700	13,400	6,800	7,200	9,400
– to internal landfill (100% non-hazardous)	19,600	23,200	22,400	16,800	17,100	24,200
– to incineration with energy recovery			100	100		
Process residuals directed to disposal (98% non-hazardous)	**26,800**	**34,900**	**35,900**	**23,700**	**24,300**	**33,600**
Process residuals diverted from disposal (side-stream products)						
– to external recipient for recycling	14,200	12,300	9,700	19,900	25,500	33,800
– to external recipient for reuse	25,700	25,400	31,900	15,700	16,700	12,200
– to internal recipient within Höganäs Group	4,200	2,500	13,100	4,000	3,800	12,700
– to internal reuse	44,400	54,700	63,400	52,300	54,000	50,700
– to internal use	4,700	3,100				
– to internal recycling	5,300	500				
Process residuals diverted from disposal (86% non-hazardous)	**98,500**	**98,500**	**118,100**	**91,900**	**100,000**	**109,400**
Internal mining	**1,700**	**27,900**				
Part process residuals put to use, %	**79**	**74**	**77**	**80**	**80**	**77**
Part put to use incl. internal mining, %	80	95				

Process residuals and side stream products

In 2023, 79 percent (74) of our process residuals were diverted from disposal, with the remaining 21 percent (26) sent to landfill. By the end of 2023, the environmental authorities issued permit to reutilise our process residuals in Brazil, which means higher volumes diverted from disposal next year.

Furthermore, in 2023 we have extracted 1,700 tonnes (27,900) of process residues from internal mining, which includes materials form internal landfills and internal storages.

We are actively promoting the use of our process residuals as side stream products. For example, of our different types of slags, three are marketed as Petrit® and are registered under REACH in the EU. In 2023, 40,000 tonnes (38,000) or 32 percent (28) of Höganäs' total residual materials were repurposed by external partners.

Non-process waste	Domestic waste		General plant waste		Packaging		
Destination, tonnes	**Hazardous**	**Non-hazardous**	**Hazardous**	**Non-hazardous**	**Hazardous**	**Non-hazardous**	**Total**
(Re)use		64		1		103	169
Incineration with energy recovery		99	74	173		311	657
Incineration without energy recovery		1	16	4		62	83
Landfill		211	20	92		3	326
Other disposal or destruction			9	5			14
Other recovery operation			16	11			26
Recycling	7	25	118	635		840	1,625
Total	**7**	**399**	**253**	**921**		**1,318**	**2,899**

Non-process waste

Non-process waste includes residual materials that are not related to our production processes. The waste consists of plastics, paper, wood, food leftovers from canteens, and residues from maintenance work. It is mainly non-hazardous materials, where 45 percent comes from packaging materials, and 63 percent is diverted from disposal. The 9 percent that in 2023 were classified as hazardous waste, consisted of construction materials, chemicals, organic substances and filters that was sent to recycling, recovery or incineration with energy recovery.

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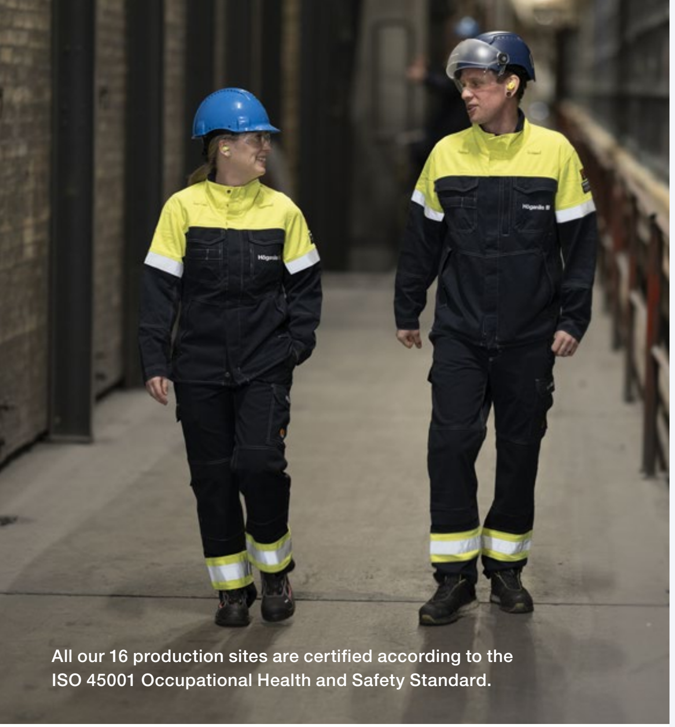

All our 16 production sites are certified according to the ISO 45001 Occupational Health and Safety Standard.

OUR OBJECTIVES

SDG 5-1
Ensuring equal treatment and career opportunities for women
>20 percent female employees
>35 percent female executive managers

SDG 8-5
Ensure fair working and wage conditions in all countries through the values and principles of More Höganäs, and by implementing the Code of Conduct.

SDG 8-8
The values and principles of More Höganäs, and systematic work working environments and occupational health and safety (ISO 45001)

SDG 10-2
The values and principles and of More Höganäs, Code of Conduct, anti-discrimination, equal treatment and diversity

Workplace

Höganäs' processes include working with hot molten metal, heavy lifting and moving machinery. Taking every precaution to ensure our co-workers' physical safety as well as their general well-being and offering career development paths are necessary elements in attracting the talent that enable us to reach our targets and ambitions. Failure to ensure a safe and engaging work environment will affect our co-workers and by extension their families and communities.

Our guiding principles and policies

Our business is aligned with the 10 principles of the UN Global Compact, including in the areas of human rights, labour, environment, and anti-corruption, and we have been a signatory since 2017. Two main documents guide our day-to-day business: The Code of Conduct that details our guiding principles and our guiding principles and our approach to human rights, labour standards, environmental precaution and business conduct, and More Höganäs, our management philosophy, that outlines our vision values, and way of working.

We aim to build a strong performance and feedback culture and have identified three key behaviours that will help us. Every year, co-workers can nominate teams or individuals to the Living our behaviours award. This is an annual award for recognising excellent performance that strengthens the implementation of our performance behaviours and demonstrates what they mean in our daily lives.

In 2023, the 'Grow with Höganäs' career development framework was launched. It details possible development opportunities and career paths, key factors for career development and the professional development process at Höganäs. The purpose is to strengthen our employer brand by providing clarity for both current and potential employees how they can grow and develop at our company.

Diversity and inclusion

Embracing diversity and inclusion enhances our problem-solving and decision-making processes by bringing diverse perspectives, ensuring every voice is heard. Additionally, it broadens our access to a more extensive talent pool.

LIVING OUR BEHAVIOURS

1. Grit
I show passion, perseverance and engagement towards long-term success.

2. Volition
I make sure things get done and I take accountability for my own, and my team's, results.

3. Candor
I voice my honest opinion and convictions to ensure the best course of action.

TOPICS COVERED IN THIS SECTION

- Health and safety (zero accidents)
- Healthy workplaces
- Labour rights
- People development
- Diversity and equal treatment

Following our updated double materiality assessment (read more on page 111) our material topics may be updated in coming reports.

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On average our co-workers had 22 hours of formalized training in 2023.

We worked on a diversity and inclusion roadmap. Within the roadmap, we broke down our previously stated ambitions into clear and measurable objectives and goals, outlining short- and long-term action plans for their implementation and delivery.

During the year, we also launched an e-learning course called 'Sustainable workplace for everyone', the third part in a series of mandatory sustainability trainings, to raise the general level of knowledge and awareness of diversity and inclusion in the organisation. The course covers subjects such as unconscious biases and was at launch accompanied by an inclusive communications guide and a poster with the golden rules for inclusive meetings. The poster has been displayed in conference rooms and similar facilities globally. The inclusive communications guide is an add-on to our Code of Conduct, and provide details how we should act and behave towards each other.

This year's leadership training, which all managers attended, was called 'Collaboration across boundaries'. It focused on how workplace culture differs between countries and emphasised on how understanding and accounting for these differences is key for better cross-border cooperation.

OUR PEOPLE

Höganäs employees	Men	Women	Total
FTEs, number	1,866	384	2,250
Recruited, number	63	21	84
Left the company, number	143	37	180
Employee turnover, %	3	5	4

FTE = Full Time Employee Equivalent.

EMPLOYEES PER REGION ACCORDING TO GENDER AND TYPE OF EMPLOYMENT

Gender, %	AMERICAS	APAC	EMEA	Total
Men	87	76	82	83
Women	13	24	18	17
Type, %				
Full-time position	100	100	94	96
Part-time position	0	0	6	4
Temporary employed	0	1	2	2
Permanently employed	100	99	98	98

Discrimination in any form, be it based on sexual orientation, gender expression or anything else, is prohibited and co-workers are encouraged to report it. In 2023, we had one case of sexual harassment, it is handled and closed and led to dismissal.

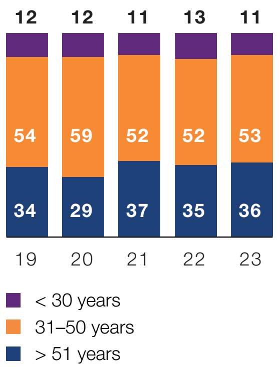
Gender is an important aspect of diversity and Höganäs operates in an industry that traditionally has been male dominated. By 2026, we aim to increase the share of female co-workers to 20 percent, and the share of female executive managers to 35 percent.

People development

The 'Grow with Höganäs' career and competence development framework was launched in 2023. See the section 'Our guiding principles and policies' for more information. There are several development programmes running, many of them regional and local. A new global talent development programme is currently being developed and will be launched in 2024.

Our co-workers receive performance and development talks quarterly or at least once a year and in 2023 a total of 67 percent of our co-workers had at least one individual talk. Most sites fulfil the obligation and cover more than 90 percent of the co-workers and nine sites reached 100 percent in 2023. The exceptions are the sites

AGE GROUPS, %



There are no significant changes over the years.

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in Germany who has not reported any talks, and US who in agreement with the union, carry out talks only with white collars. Höganäs Academy is our competence development platform. It provides practical tools and learning resources to help our co-workers grow. Our aim is that learning and developing should be built into every position at Höganäs. This is based on the 70:20:10 model, where 70 percent of knowledge comes through experience, 20 percent through other developing activities and 10 percent through structured courses and programmes.

Labour rights

We apply principles for fair treatment and equal pay and follow national legislation for labour terms in all our operations. As emphasised in our Code of Conduct, we support freedom of association and the right to collective bargaining.

Freedom of association is protected by law in all countries in which we operate, and Höganäs supports this freedom and the right for employees to join organisations of their choice. In cases where there is no union represented, the company negotiates labour terms and conditions with elected employee representatives. If employees in a location do not want to appoint representatives, we promote direct and open communication between employees and management and provides other means to negotiate as appropriate.

As standard practice, our employees receive a written individual contract in a language they understand. Our US operations are exempt from this practise, due to terms for blue-collar personnel being set through a collective bargaining agreement. In Japan, the written contracts are in English and verbally translated for those who do not understand English. In 2023 81 percent (82) of our employees were covered by collective bargaining agreements.

Minimum notice periods before operational changes are mostly stipulated in collective agreements and range from one week to six months depending on the nature of the change and local practice. The average is six weeks.

Höganäs operates retirement and pension plans that vary on a local level, based on legal and market requirements and practices.

Since 2010, Höganäs has had a profit-sharing system that includes all employees. In 2023, 92 percent (93) allocation was reached, amounting SEK 25.7 million (35.5).

Under EU rules, male and female employees are, regardless of their type of contract, entitled to parental leave on the birth or

Share of female per level, %	2023	2022	2021
Co-workers	17	17	17
All managers	19	18	22
Excecutive managers	29	29	27
Group management team	17	18	9
Board of directors	30	27	25

Comments on outcome: During 2023, 37 percent of our employees had training in human rights and 6 percent had anti-corruption training. Our anti-corruption policy was communicated to 13 percent of our total workforce during last year. The anti-corruption policy is undergoing an update and a new training package will be launched subsequently, which means some training is postponed until then.

Training, number of hours	2023	2022	2021	2020	2019
Training provided to Blue-collar	**31,475**	**32,285**	**25,090**	**19,094**	**12,768**
– whereof women	1,725	1,711	993	1,176	898
– whereof men	29,751	30,574	24,097	17,918	11,870
Training provided to White-collar	**18,344**	**18,765**	**8,542**	**7,185**	**12,469**
– whereof women	4,545	5,568	2,030	2,081	4,913
– whereof men	13,799	13,197	6,512	5,104	7,556
Training provided to employees, number of hours	**49,819**	**51,050**	**33,632**	**26,279**	**25,237**
Female employees	6,269	7,279	3,023	3,257	5,811
Male employee	43,550	43,771	30,609	23,022	19,426
Anti-corruption, share of av all employees, %					
Communication	13	18	31	58	6
Training	6	3	20	9	2
Total communication of anti-corruption:	**19**	**21**	**51**	**67**	**8**
Human rights, share of all employees, %					
Training in human rights	37	18	44		
Number of employees (headcount)	2,278	2,339	2,305	2,345	2,420
Number of training hours per co-worker (headcount)	**22**	**22**	**15**	**11**	**10**

	Benefits provided to all permanent employees			Benefits provided to temporary employees		
	AMERICAS	APAC	EMEA	AMERICAS	APAC	EMEA
Life insurance	X	X	X	X	X	X
Health care	X	X	X		X	X
Disability and invalidity coverage	X	X	X		X	X
Parental leave	X	X	X	X		X
Retirement provision	X	X	X	X	X	X
Profit sharing plan	X	X	X		X	X

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adoption of a child. Employees can also take parental leave at any time until the child is eight years old. However, this age limit may be lower in some countries according to national law.

For employees in India, where Höganäs employs around 80 people in management, sales, administration and operations, there is no statutory paternity leave. However, since 2020 we have offered seven days of paternity leave and encourage all men to use this benefit. In 2023, there were three male employees on parental leave for 21 days.

Health and safety

The safety performance has plateaued, and further actions have already been taken to strengthen the safety culture. We are working in a systematic way to reduce the most serious physical and psychosocial risks. The analysis of physical injuries shows that we need to address actions in five main areas: falls from heights, particles in eyes, falls and slips while walking, cuts, and back pain. A lot of activities and initiatives are ongoing, but looking at our LTI & TRI performance, we do not achieve the expected result.

Our objective is to reduce work-related injuries and cases of ill health to zero. 'Safety first' sums up our aim to create a solid safety culture, where dialogue and risk-elimination are key, and where the main rule is to never compromise on safety.

Our Health and safety policy, available in eight languages, explains how to apply our principle 'we work safely – or not at all' in daily work. The policy also contains principles for managing psychosocial and stress-related risks.

To maintain high risk awareness among co-workers, job-descriptions include the typical risk exposure of that position. All employees receive mandatory health and safety training adapted to their individual work. General safety training is also part of the introduction of new employees. In addition to mandatory training, we spread knowledge through our best practice groups, thematic safety conferences, workshops, videos, booklets, and guiding tools.

Health and safety committees exist at different levels in our organisation and include both production and administration types of departments. The meeting frequency can vary between countries and sites, but the minimum frequency is to meet four times a year.

All our 16 production sites are certified according to the ISO 45001 Occupational Health and Safety Standard (OH&S). All offices have an OH&S Management system.

A global incident and risk reporting system is used by all co-workers to report incidents including accidents, near misses and risk observations. The reporting system logs root cause analyses, investigations and actions taken.

Health and safety performance, co-workers and other workers	2023	2022	2021	2020	2019	2018
Number of recordable injuries	65	71	61	80	221	164
Number of lost time injuries[1]	31	30	22	24	34	37
Number of high-consequence work-related injuries	0	1	0	0	0	1
Number of fatalities	0	0	0	0	0	0
Lost time injury frequency per million hours worked	7.2	6.9	5.0	6.0	7.6	8.2
Recordable injury frequency per million hours worked	15	16	14	20	49	36
Incident reporting frequency[3]	121	90	115	120	63	53
Sick leave rate, %	3.5	4.1	3.7	3.8	3.7	3.8

1 *Including all reported injuries with or without absence from work and commuting accidents. Figures for 2020 and 2021 are corrected due to improved criteria for recordable injuries.
2 Including injuries and commuting accidents and commuting accidents leading to absence from work.
3 Reported risk observations, near misses and accidents per lost time accident.

While diligent and systematic work on physical safety risks is being done, our safety record is not satisfactory. A major cause is our behaviour, which is due to an insufficiently strong safety culture. Changing a culture is not easy and there is no exact how-to manual that changes individual behavioural patterns.

During our annual Global safety week, which was organised for the fourth consecutive time, we launched Nine lifesaving rules accompanied by detailed explanations including what is expected in terms of behaviour at all Höganäs sites globally. The rules themselves are short so that they are easily remembered and present in the minds of all co-workers.

In 2023, Safety walks by leadership were introduced as a way of strengthening the safety culture from the top. When Group management or the Global operations management team meet at a site, they perform a safety walk to engage in safety in a systematic way.

Other initiatives in 2023 include continued roll-out of Safety toolbox, Safety maturity assessments and Safety dialogue maps that help guide safety conversations between management and co-workers.

Promoting healthy lifestyles and work-life balance

Höganäs actively promotes healthy lifestyles and work-life balance. While the heavy focus on avoiding physical work-related injuries is a natural consequence of our business, we aim to provide an overall healthy working life and take stress-related mental ill-health and burn-out, which is increasing in society, seriously. Consequently, we also take a broader perspective on health, including mental wellbeing and non-work-related issues.

Depending on the type of work, medical health checks are carried out regularly. Occupational health services are provided locally and adhere to national legislation. In line with local needs, we proactively offer lifestyle health promotion activities that include rewards for cycling to work, step-counting competitions, weight-loss advice, access to stop smoking groups, contributions to wellness programmes and gym memberships, and offering healthy lunch options.

Regular Team check-ins and an open dialogue between co-workers and managers are also important tools for detecting and preventing negative work-related stress. We have had cases of mental ill-health because of work-related stress but lack groupwide statistics on this issue.

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More than half of our raw materials are sourced within the country of operation.

OUR OBJECTIVES

SDG 8-7
Responsible sourcing programme.

SDG 8-8
Responsible sourcing programme.

SDG 12-8
Responsible sourcing programme.

SDG 16-4
Höganäs' internal work to increase competence and capability, and the work in our sphere of influence such as supply chain, customers and other stakeholders in society.

SDG 16-5
Höganäs' internal work to increase competence and capability, and the work in our sphere of influence such as supply chain, customers and other stakeholders in society.

Society

Managing relationships with suppliers, ensuring ethical business behaviour, and ensuring that workers in our value-chain are treated fairly are part of our responsible sourcing strategy.

By holding ourselves and our business partners to high ethical standards, we ensure that we contribute to a better society for all. Failing to manage these issues will damage trust in Höganäs as a company and have long-term negative effects on affected communities.

Business ethics

Höganäs' Code of Conduct outlines how we interact with our business partners, owners, co-workers and the surrounding community. It reflects our respect for human rights principles, our zero tolerance of corruption and it applies to all co-workers and all people acting on behalf of Höganäs, for example board members and agents.

In 2023, we had 29 active contracts (28), many long-term, with agents (representatives acting on behalf of Höganäs), covering activities in 42 countries (33). During the year we have not signed any new contracts (3).

Prior to signing new contracts with an agent, an integrity audit is conducted, looking specifically at bribery or other corruption risks. Besides the requirement to comply with applicable anti-bribery laws and Höganäs' anti-corruption policy, these agreements also include permission for us to request an audit of the agent's financial records by an independent auditor to verify compliance.

Social impact assessments covering health and safety, and environmental risks are carried out locally at each production site. 10 out of 13 sites have also included other topics such as gender impact, economic and infrastructural impact and corruption risks while 11 included humans' rights risks.

The societal responsibility of Höganäs is also manifested through our transparency and our non-negotiable compliance with legislation as well as our standards for financial and non-financial reporting.

TOPICS COVERED IN THIS SECTION

- Responsible sourcing
- Human rights
- Ethical business behaviour
- Good citizenship

Following our updated double materiality assessment (read more on page 111) our material topics may be updated in coming reports.

Creating value for society

In addition to value added by our products, we contribute to society by paying taxes, salaries, and invoices from suppliers as well as interest to creditors.

Value created, SEK m	2023	2022	2021	2020	2019	2018
Net Sales	12,334	12,256	10,527	8,645	10,343	10,361
Economic value distributed						
Cost of goods sold	10,116	9,976	8,075	6,613	8,177	7,753
Tax	213	162	226	206	210	175
Salaries, other benefits and social security expenses	2,164	2,109	1,935	1,832	1,934	1,810
Investments excluding acquisitions	841	656	339	351	701	671
Equity	11,673	11,544	10,476	9,886	9,806	9,046
Total	**25,007**	**24,447**	**21,051**	**18,888**	**20,828**	**19,455**

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Tax

Höganäs acts as a responsible global corporate tax citizen in compliance with applicable tax law and regulations everywhere we operate. We always strive to ensure compliance with transparency requirements, and we do our utmost to avoid transactions or arrangements that may be considered tax evasion. Governing our tax practices are, besides national legislation, our Code of Conduct and Höganäs Corporate Governance Directive.

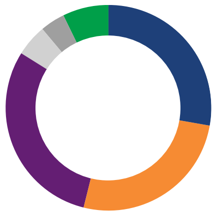
Engaging the local community

We welcome and appreciate feedback from the local community, promote dialogue during open house days and engage in other community engagement activities. Face to face interaction with members of the community is now back to pre-pandemic levels. Open house days were held at the premises in Höganäs, Sweden and Mogi das Cruzes, Brazil.

We encourage dialogue with those who live close to our premises and all production sites have grievance mechanisms in place, where local representatives respond to questions and complaints. In 2023, we received 11 complaints from neighbours regarding noise, smell, dusting and disturbing lights. One case resulted in the installation of noise containment devices, another in improved watering procedures to minimise dusting. In two cases where contractors had not followed agreed ways of working, corrective measures were taken, and cases are now closed. Two cases are still open. In five cases the complaints could not be verified as connected to Höganäs' activities. These cases were closed without action after follow-up with the informant.

We encourage all our production sites to engage with local communities according to our Group Framework for Community Engagement and Donations and to prioritise in accordance with local circumstances. Our Sponsorships and Donations Directive is designated to ensure that all funds are used ethically and according to the intended purpose. In 2023, the largest share was directed towards well-being.

COMMUNITY CONTRIBUTIONS



Voluntary community contributions and sponsorships are decided by each local operation according to our guidelines for sponsorships and donations. The largest parts are directed towards well-being and youth empowerment.

Whistleblowing

All co-workers are encouraged to report incidents, for example non-compliance with our Code of Conduct or increased risks concerning corruption, conflict minerals or child labour. Reports are primarily managed within the line organisation, or alternatively reported to the Human Resources Department or Corporate Legal. If this is not possible or appropriate, Höganäs provides a group-wide reporting system, operated by a third party. It enables our co-workers to report anonymously and confidentially in any language via phone or a website.

Our suppliers, customers, partners and neighbours may also report suspected violations of laws or our Code of Conduct in accordance with local procedures or through the whistleblower function on our website.

When a case or incident is reported, a transcript is sent by the third party to a designated external lawyer and the chairman of the audit committee. These recipients will then assign the investigation to a person with sufficient mandate, who is not involved in the reported matter.

During 2023, 4 (5) new cases were reported, of which 3 questioned appropriate behaviour in leadership One case was about a situation where an employee was suspected of having shared business-related information with third party or using the information for own purposes. The investigation led to the person's dismissal. None of the other reports led to further consequences for individual employees. All cases have been handled according to procedures and are now closed.

Our supply chain

Höganäs had 556 suppliers (405) of direct materials and around 5,900 suppliers (3,800) of indirect materials, transportation, and other services in 2023. 17 new suppliers (53) were screened during the year.

RESPONSIBLE SOURCING POLICY

SUPPLIER CODE OF CONDUCT

CONFLICT MINERALS AND COBALT POLICY

Our total spend on external suppliers was SEK 9,784 million (10,887), of which 60 percent (60) was spent in Europe, 30 percent (30) in the Americas and 10 percent (10) in Asia. Around 35 percent of our raw material spend is sourced through distribution channels or traders. We prioritise local suppliers, which is positive also from a sustainability (emission) point of view. More than half of our raw materials are sourced locally within the country of operation. Services such as maintenance, consultancy and contracting are sourced near our operations when possible.

We take our responsibility to safeguard our customers' data and privacy seriously and have policies, routines and systems in place. During the year, we have had no reported breaches of privacy or data losses.

Responsible sourcing

Our Responsible Sourcing Programme encompasses steering documents that guides Höganäs and our suppliers to stay compliant with international principles such as UN Global Compact and its related conventions, and legal frameworks related to human rights, anti-corruption and conflict minerals. The programme includes a governance structure and a compliance organisation, with clearly defined roles and responsibilities, as well as procedures for escalation to senior management.

We work systematically to improve the sustainability performance of our suppliers. Before onboarding, new suppliers are required to respond to our supplier questionnaires to enable us to assess the supplier's compliance with our commitments and policies.

Our policy is to only approve suppliers that can ensure that they themselves and their suppliers adhere to internationally agreed principles and relevant legal frameworks, and transparently show evidence of compliance when approached to do so.

All our suppliers are contractually bound by our policies and Supplier Code of Conduct. Risks related to suppliers, including human rights risks, conflict minerals risks and corruption risks, are assessed based on geography, previous performance and each supplier's own

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self-assessment regarding compliance with our Supplier Code of Conduct and other applicable policies. If risks or non-compliances are detected, the first step is a dialogue with the supplier to determine whether there are opportunities to mitigate risks and improve performance. If there are not, or of the supplier is unwilling to improve, cooperation with the supplier will be terminated as a last resort.

Our target is that 100 percent of our around 300 key suppliers shall be rated as 'good' or 'excellent'. In 2023, 78 percent (82) of our suppliers achieved this status.

During the year, we had 63 cases of insufficient supplier responsiveness, where suppliers failed to respond to a request for self-assessment, performed poorly in an assessment or failed to show willingness to improve. Following in-depth dialogues, 35 cases during 2023 were closed, and we could continue business relations. Ongoing discussions remains with the rest and are considered to be of minor character.

There were no suppliers with risks identified related to the right to freedom of association, collective bargaining, child labour or forced labour.

Conflict minerals, cobalt, and human rights

Our Conflict Minerals and Cobalt Policy includes our stance on human rights risks in the cobalt industry. It was developed in response to EU regulation on conflict minerals (tantalum, tin, tungsten, and gold) that came into effect in January 2021. The suppliers relevant to conflict minerals and cobalt are evaluated annually through an in-depth questionnaire based on the Responsible Mining Initiative framework.

We source only from metal suppliers that are listed as responsible by the European Commission, the Responsible Minerals Initiative or have had their due diligence practices audited by a third party against a standard aligned with OECD Guidance, which means they can prove that their material originates from responsible smelters.

Conflict minerals legislation applies to 37 of our direct suppliers. So far, we have made a due diligence investigation regarding the requirements on all 27 of our suppliers in the regions Europe, the Middle East and Africa (EMEA). Out of the 25 suppliers assessed for conflict minerals, 5 provide 100 percent recycled materials (scrap metal). Three suppliers gave a warning of Conflict minerals questionnaires. One was discontinued and two were approved after review in 2023.

Höganäs' head office is situated in Höganäs, Sweden.

Höganäs has a seat in the governance body of the following industry associations

- European Powder Metallurgy Association (EPMA)
- Metal Powder Industries Federation (MPIF)
- Powder Metallurgy Association of India (PMAI)
- Additive Manufacturer Green Trade Association (AMGTA)
- Swedish Life Cycle Center (SLC)

Höganäs participates in projects and committees in

- Japan Powder Metallurgy Association (JPMA)
- Jernkontoret (Swedish steel producers' association)
- Eurofer (European steel association) represented by Jernkontoret
- Korean Powder Metallurgy Institute (KPMI)
- China Powder Metallurgy Alliance (CPMA)

Höganäs is a signatory of the UN Global Compact and has climate targets validated by the Science Based Targets initiative.

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HÖGANÄS » **INSIDE**

Increasing water security in rural India

From Höganäs plant in Ahmednagar, which is about 180 kilometres east of Mumbai, a 40-kilometre drive southeast will take you to the rural village of Waghluj. There, Höganäs has partnered with the NGO (non-governmental organisation) Navajeevan Gramoday Pratishtan* to build it into a prosperous lush village.

"It is an inaccessible but extremely beautiful village," says Rajendra Pawar, director of Navajeevan Gramoday Pratishtan.

Companies in India are required to spend two percent of profits on Corporate Social Responsibility (CSR) activities and since profits for Höganäs India has increased in recent years, so has the funds available for CSR. After a survey of villages, Waghluj was chosen for development based on social, economic, and geographical factors.

The program covers five aspects: land, water, plants, animals, and people. Due to climate change, rainfall and temperature patterns in the region is changing and there are more droughts.

"This is a long-term commitment for us. Making all the projects part of a larger plan as we do in Waghluj means we can have a substantial positive impact," says Sharad Magar, Director of Manufacturing at Höganäs in India.

Starting with water, the project successfully halted the leakage of the village's main dam, extending water retention by three months.

Additionally, two dams underwent repairs, and water reservoirs were strategically built on the surrounding hills to reduce surface water run-off volume and velocity. This reduces the risk that heavy rains washes soil and plantings off the hillside. Finally farm bunding, building walls around agricultural fields, to conserve water and decrease watershed risks was done on 52 hectares.

With water security increased, education on organic farming, plants and seeds are now provided to the village's farmers.

Simultaneously, trees are also being planted. So far, three different projects, including two forest projects, have been started. And the school has been upgraded with a new borewell, sporting equipment and dining hall.

"The changes are visible here and we are extremely grateful and thankful to Höganäs," says Pawar.

RAJENDRA PAWAR

SHARAD MAGAR

*A non-governmental organization that has been working since 1994 to develop socially and economically deprived, excluded, and marginalized sections of Indian society through capacity building, promoting people's organizations, and managing natural resources

Financial information and notes

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Board of Directors' Report

The Board of Directors of Höganäs Holding AB, corporate identity number 556915–6655, registered in Sweden with its registered office in Höganäs and address SE-263 83 Höganäs, hereby presents its Annual Report for the 2023 financial year. The results of operations in the year and the financial position of the parent company and the Group are presented in the Board of Directors' Report and in the subsequent income statement, statement of comprehensive income and statement of financial position and the parent company's income statement, statement of comprehensive income and balance sheet, together with notes and comments.

Business summary

Höganäs is the world's leading producer of metal powders and has approximately 3,000 customers in 75 countries around the world. Based on a clear vision of the potential of metal powder to improve efficiency, the consumption of resources and environmental impact in a number of areas, the company has developed diverse application expertise. Together with its customers, the company develops solutions for today's and future electric vehicles, surface coating systems and metal powders for additive manufacturing.

Global macro trends, such as sustainability and custom manufacturing, contribute to today's business and create new opportunities for the future. The ongoing electrification in the automotive industry in particular presents challenges, as a large proportion of Höganäs' current sales are focused on combustion engines. At the same time, electrification creates new opportunities, where Höganäs offers products for customers' passive and active electrification applications.

Organisation

Höganäs is organised in product areas and continents. The product areas are responsible for customer-centred development of metal powder products and solutions. They are global organisations with employees both in Sweden and in countries where Höganäs operates.

The Electro & Mechanical Technologies (EMT) product area includes powders and solutions for sintered components (powder metallurgy, PM), Soft Magnetic Composites (SMC) and vehicle electrification. These technology segments have long been Höganäs' core business and continue to be a very important part of operations.

In the wake of the major changes in the electrification of the automotive industry, Höganäs can contribute to more sustainable and efficient electric vehicles, for example, through its soft magnetic metal powders and related solutions. This segment includes Alvier Mechatronics, which sells engineering and design services to the automotive industry to expand the market for metal powder in electric vehicles, the newly established company ZeBeyond, which develops software that facilitates data-driven decision-making for manufacturers, and Alvier PM-Technology, which offers services and solutions for powder metallurgy components.

The Surface & Joining Technologies (SJT) product segment includes the technical segments of surface coating, high-temperature brazing and welding. Höganäs sees great potential in surface coating and aims to increase its market share in this segment.

The Customization Technologies (CT) product segment works with powders and solutions for additive manufacturing (3D printing), metal injection moulding (MIM) and hot isostatic pressing (HIP). This is a relatively new segment and corresponds to a small part of Höganäs' business. However, there is great potential, not least by developing offerings for the ever-growing 3D printing market.

Höganäs' operational and tactical sales efforts are organised in three continents: Americas (North and South America), EMEA (Europe, Middle East and Africa) and APAC (Asia Pacific). The product areas and continents work closely together to drive Höganäs' business development and to ensure customer satisfaction.

Other functions are Global Operations, which manages the company's global production operations, as well as the Group-wide functions HR & Communication, Finance & IT, Legal and Sustainability.

Development of the Group's operations, earnings and position

Net sales

The Group's Net sales are on a par with the previous year and amounted to SEK 12,334 million (12,256). 415,000 tonnes (434,000) were produced during the year; a decrease of 4.4 percent. The lower volume had a negative impact on Net sales, but was off-set by positive exchange rate effects. The year was characterised by continued uncertainty in the market due to the war in Ukraine and the higher interest rate situation.

APAC is the Group's largest market at 40.1 percent (40.3) of sales, followed by the Americas at 31.3 percent (31.8) and EMEA at 28.6 percent (27.9). Overall, APAC lost volume but recovered in the second half of the year and this trend continues to look positive going forward. The Americas is the company's most stable market and has maintained volumes year-on-year. EMEA, on the other hand, is the market that has lost the most volume.

Almost all of the Group's product segments decreased in volume, while sales remained unchanged or increased as a result of a weaker Swedish krona. Due to its size, Electro & Mechanical Technologies in particular contributes to this picture.

One-off items

During the year, the Group had negative one-off items of SEK –139 million (384), due to the closure of the Metasphere business in Luleå of SEK –51 million and impairment of intangible assets of SEK –88 million.

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In the previous year, one-off items largely consisted of the net capital gain of SEK 396 million from the divestment of Digital Metal AB. In addition, a net cost of SEK 12 million relating to restructuring was added, consisting of costs attributable to the closure of water treatment operations of SEK 45 million and shutdown in Russia of SEK 6 million, which was off-set by a positive effect of added back provisions relating to the discontinued operations in Niagara Falls in the US.

EBITDA

EBITDA before one-off items amounted to SEK 1,494 million (1,490). The EBITDA margin before one-off items amounted to 12.1 percent (12.2).

Operating income

The Group's operating income decreased to SEK 716 million (1,121) or 5.8 percent (9.1) of Net sales. Adjusted for one-off items, operating income amounted to SEK 855 million (737), corresponding to a margin of 6.9 percent (6.0). The main reasons for the higher underlying result are positive mix and exchange rate effects as well as lower underlying costs due to restructuring. However, these effects were off-set by the lower volumes for the year.

The Group hedges its flows in various currencies. This helped to reduce significant currency fluctuations. The Group's currency effect was positive in 2023 at SEK 153 million (112) net.

Selling expenses, administrative expenses and research and development expenses amounted to SEK 1,447 million (1,564), a decrease of SEK 117 million. This decrease was driven largely by savings and restructuring, but was off-set by general wage increases and higher inflation.

Other operating income and expenses amounted to SEK –49 million (407) and consisted largely of impairment of intangible assets of SEK –88 million and government grants of SEK 46 million. The previous year was affected by the capital gain of SEK 396 million from the divestment of Digital Metal AB.

Net financial items

Net financial items amounted to SEK –126 million (–180).

Interest expenses, including interest on leasing, amounted to SEK –237 million (–132). The higher interest costs are explained mainly by the higher interest rate situation in the market, which was partly off-set by lower borrowing during the year.

Interest income was also affected by the higher interest rate levels and amounted to SEK 99 million (16).

The year's positive foreign exchange gains and losses amounted to SEK 14 million (–61) net and are explained mainly by the exchange rate effects on liabilities in EUR when the Swedish krona strengthened towards the end of the year.

Earnings before tax

The Group's earnings before tax decreased to SEK 590 million (941) or 4.8 percent (7.7) of Net sales.

Taxes

The Group's tax expense amounted to SEK 213 million (162), which corresponds to an effective tax rate of 36.0 percent (17.3), see Note 9. The higher effective tax rate during the year is explained by impairment of goodwill of SEK 71 million and remeasurement of deferred tax assets of SEK –9 million related to the US and the reversal of previously recognised loss carry-forwards that expired during the year. The low effective tax rate in the previous year is explained mainly by the fact that the capital gain from the divestment of Digital Metal AB was non-taxable income and that the subsidiary in Germany recognised deferred taxes in 2022 relating to historical tax losses carry-forwards of EUR 3.7 million.

Capital employed

Inventories amounted to SEK 3,423 million (4,050) and accounts receivable to SEK 1,549 million (1,668). The decrease in inventories is the result of an active decision to reduce inventory volumes, as the previous uncertainty regarding energy availability has now reduced. The decrease in inventories, but also in accounts receivable, is to a certain extent also due to lower raw material prices during the year. The average capital employed in the Group amounted to SEK 15,478 million (15,442). Return on capital employed amounted to 4.6 percent (7.3). Goodwill amounted to SEK 6,198 million (6,272) at the end of the financial year.

Investments

Investments totalled SEK 841 million (660) divided between intangible assets of SEK 327 million (198) and tangible assets of SEK 514 million (462). Investments in intangible assets is attributed mainly to the acquisition of emission allowances and the acquisition of right-of-use assets for land in China. Investments in tangible assets were higher than in previous years, as the level of investment in recent years was lower as a result of the pandemic. As in the previous year, investments during the year related mainly to the production facilities in Sweden, Germany and the US.

Financial position and equity/assets ratio

Equity at year-end amounted to SEK 11,673 million (11,544), which represents an equity/assets ratio of 64.9 percent (60.7). The Group's net debt amounted to SEK 2,667 million (4,152), corresponding to a net debt/equity ratio of 0.2 (0.4). Net debt/Adjusted EBITDA before one-off items amounted to 1.7 (2.8).

Cash flow

Cash flow from operating activities amounted to SEK 1,937 million (662). Compared to the previous year, a great improvement in working capital of SEK 631 million (–598) is the main reason for the higher cash flow, where the change in inventory had the greatest positive impact.

Cash flow from investing activities amounted to SEK –578 million (–170). The change between the years is explained mainly by the fact that the previous year was positively affected by the divestment of Digital Metal AB of SEK 338 million.

Cash flow from financing activities amounted to SEK –1,053 million (–398). The change is explained mainly by reduced net borrowing during the year of SEK 1,086 million. The previous year was affected by a dividend of SEK 200 million paid to the owners.

Cash flow for the year amounted to SEK 306 million (94).

Ownership structure

Höganäs Holding AB has been a joint venture since 27 August 2013. The two owners FAM AB and Lindéngruppen AB each own half of the shares and votes.

The operating activities are conducted through Höganäs AB and its subsidiaries. At the time of signing the Annual Report, the Board of Directors of Höganäs AB consisted of Magnus Hall (Chairman), Anna Månsson, Paul Schrotti, Kristian Sildeby, Charlotte Strömberg, Erik Urnes, Robert Hermans, the two employee representatives Lisa Kjellén and Tony Petersson and Henrik Ager, President and CEO.

Fredrik Emilson, former President and CEO of Höganäs AB, left Höganäs in January. Mikael Bratt and Lars Wedenborn, members of the Board of Directors, stepped down from the Board in May and November 2023 respectively, and Robert Hermans, CEO of IPCO, was welcomed as a new Board member.

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Significant events during the financial year

2023 was characterised by worldwide unrest and conflicts that affected the global economy. The economic uncertainty, exacerbated by high inflationary pressures and rising interest rates, led to subdued market demand. This in turn influenced investment trends, especially in the automotive sector, where consumers postponed larger purchases. Despite these challenges, Höganäs managed to maintain a stable financial performance. Demand was more affected in EMEA than in the Americas, and although energy costs were higher in 2023 than in 2021, they fell from the record highs seen in winter 2022/23. Höganäs did not suffer from a shortage of energy or raw materials.

Following a strategic review and due to a changing market outlook, a decision was taken to discontinue the Metasphere operations in Luleå, Sweden, where new atomisation technology was developed. The decision was due to weak demand for the type of metal powder produced by Metasphere and a focus on prioritising Höganäs' core business.

Henrik Ager took over as new CEO of Höganäs on 2 October 2023. He was previously CEO of Copperstone Resources AB. Prior to that, Henrik worked at Sandvik for eight years as Business Area Manager for Sandvik Mining and Rock Solutions, Divisional Manager for Sandvik Rock Tools and Vice President for Strategy for Sandvik Mining.

Research and development activities

At Höganäs, approximately 130 engineers and technicians work on research and development. Most of these are located in Sweden, but there are also smaller development units in the US, Germany, India and China.

Customer processes in sintered components and soft magnetic composites can be found in the Customer Development Centres (CDC) across the world. CDCs are used to optimise new materials and products, conduct customer-specific surveys, manufacture components on a pilot scale and for internal and external training. Next to the Customer Development Centre in Sweden is a modern and fully equipped laboratory, Servus.

Tech Centres providing technical support to customers are located in all regions. There are development centres (ArcX) in all regions for surface coatings; the latest were opened in the US and India in 2023.

Research and development costs for the year, including technical customer service and Höganäs' internal process development, amounted to SEK 226 million (241). Development costs attributable to ongoing development projects of SEK 12 million (27) were also capitalised in the balance sheet during the year, while corresponding disposals amounted to SEK 15 million (2).

Risks and risk management

The Group's operations are influenced by several external factors and by internal capabilities. The geopolitical situation continued to be tense in 2023 and the risk of various trade barriers in the form of customs duties, sanctions and export restrictions, for example, needed to be monitored and managed. The Group was also affected by international economic developments.

The energy situation stabilised in 2023 compared to 2022 and even though there was not the same clear risk of a shortage situation, energy prices remained high. Höganäs invested in a propane plant during the year in order to be able to handle temporary shortages in natural gas supplies.

During the year, the company reviewed and developed its risk analysis process and method in order to obtain a better consolidated picture of the risks in the business and the conditions for achieving strategic and financial goals. The risks considered to be of the greatest importance for the company are presented below.

Risk descriptions	Management
Market and product development risks Höganäs has a high exposure to the automotive industry and is therefore affected by trends in this industry. Electrification is about to change the vehicle fleet, but there is still uncertainty about the pace of change and which technologies will dominate in electric engines and vehicle platforms. However, in view of their dominant market position, combustion engine vehicles, including the hybrid vehicle segment, are considered to remain relevant in both the short and medium term. As the proportion of electric vehicles increases, Höganäs' traditional core business will be affected.	To manage trends in the industry, Höganäs has a clear strategic focus on developing materials for the industry's new requirements in conjunction with industry players, including the further development of soft magnetic materials.
Geopolitical risks The geopolitical situation is tense. At the same time, the consequences of climate change, such as floods and droughts, are leading to humanitarian crises and refugee crises, resulting in further geopolitical instability. As a consequence of the geopolitical situation, rules and restrictions on trade became more complex in 2023. Compliance with sanctions and trade restrictions is part of the daily business agenda and more and more customers are demanding guarantees of Höganäs' compliance with relevant regulations. An uncertain geopolitical landscape creates logistical challenges when it comes to sourcing raw materials and ensuring timely access to equipment. Disruptions in markets and trade lead to price increases for raw materials, transport and energy due to political restrictions.	As a player in the global market, Höganäs maintains efficient and standardised processes to ensure business intelligence and compliance, and to manage the risks of the rapidly changing trading landscape. Höganäs' compliance programme is under the overall responsibility of Corporate Legal. Höganäs works proactively on procurement to establish reliable and sustainable raw material suppliers. Höganäs assesses both environmental and social risks related to conflict minerals when supply chain risks are analysed and manages these risks in accordance with established procedures and policies.

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Risk descriptions	Management
Production and material supply risks Metal powder production takes place in a chain of processes where disruptions in the various links could have major consequences. Business interruptions due to transport barriers or fire, explosions or other types of accidents could therefore be costly. Procurement risks include security of supply, quality and price of materials and energy, as well as macro risks that limit trade, and the risk of supplier failure. Höganäs is also exposed to the risk that various forms of trade barriers impede the procurement of certain raw materials and internal material flows.	In addition to its own annual reviews of assessed plant risks, Höganäs conducts comprehensive annual inspections of the company's production plants together with together the insurer providing property and business interruption insurance. Ongoing and systematic damage prevention work is carried out with a view to reducing the risk of production disruptions. In order to minimise the risks of the consequences of potential disruptions, safety stocks are kept of certain critical raw materials and finished products. Production can be relocated within the Group to a certain extent to reduce the risk of production losses. Höganäs strives to always have at least two suppliers for selected strategic raw materials and constantly monitors trends in both supply and price. As had been the case in the previous year, this was a priority area as there was a limited number of suppliers for several critical materials. Höganäs maintains plans for how material flows can be redirected and what alternative options are available for material supply.
Sustainability risks The production of metal powders generates direct climate emissions in our own operations and has a large climate impact in the value chain. Failure to convert production would expose Höganäs to the risk of losing its position as a leader in its market. Transition can involve a risk of investing in the wrong technology, higher costs and not achieving goals on time. The transition to fossil-free sponge iron production in particular is challenging as there are no industrialised methods for such production.	Höganäs has an ambitious sustainability agenda that includes a conversion of its own operations. The company is working intently to develop alternative processes to reach the net-zero target by 2030, where sponge iron currently represents the largest single source of direct climate emissions.
Risks related to unethical business conduct The world around us is placing increasing demands on sustainability in social areas linked to human rights and governance of operations in order to combat bribery, corruption and the financing of terrorism. There is a risk that these requirements become so extensive and complex that compliance becomes more difficult. Unethical business conduct that damages the company's reputation because someone acts unethically on Höganäs' behalf, for example an employee or an agent. Unethical activities of business partners, such as customers or within the supply chain, that involve the company.	Höganäs imposes requirements for counterparties and has processes in place to evaluate them. These processes include, among other things, the screening of business partners such as dealers and agents. Identified risks associated with the value chain are managed systematically, primarily locally with the support of governing documents and established procedures, but are escalated to the Group's support functions as necessary. Höganäs has a Code of Conduct and related policies to ensure that its employees and business partners demonstrate strong business ethics. Mandatory training on anti-corruption and ethical business conduct is arranged for all employees to raise awareness and in the interests of prevention. Höganäs always strives to ensure compliance with transparency requirements and to avoid transactions or arrangements that could be considered tax evasion.
IP risks Various types of intellectual property are of great value to Höganäs' business.	Höganäs protects technical inventions and processes developed within the Group through patents, or as trade secrets. Corporate Legal and the functions that work on developing products and processes work closely together to develop strategies and processes on an ongoing basis to ensure that the value of innovations and intellectual property rights stays in the company. Höganäs monitors compliance with patent protection and that Höganäs does not infringe the rights of others.
Environmental risks Environmental risks are linked to the company's own operations, as well as to amended legislation and regulations that may entail responsibility for contaminated land and post-treatment or stricter environmental requirements for existing operations.	Höganäs has good control over its own operations through its externally verified environmental management system and works proactively on a strategy for prioritising different areas, investigations and control programmes.
Risks related to the development of legislation Increased or amended sustainability legislation can present challenges for Höganäs to ensure compliance. Legislation or market changes can accelerate the demand for net-zero products and processes faster than Höganäs can deliver them.	Höganäs manages regulatory risks by ensuring that we have the right resources to monitor legislation and ensure compliance. Through membership of industry associations, we support harmonised rules that promote and enable sustainable business practices. By being proactive and working towards the company's sustainability goals, the risk of non-compliance is reduced.
Cyber risks Cyber risks pose a threat to Höganäs and have the potential to paralyse parts of the Group's operations.	These risks are managed by implementing and maintaining technical and organisational protective measures proportionally and on an ongoing basis. As cyber risks escalate globally, Höganäs is intensifying its efforts to address these risks.
Risks linked to competence and culture The ability to attract and retain skilled employees, as well as having a culture of willingness to change, diversity and inclusion, is important in order to be able to run the business with good profitability in the long term.	Skills and management development is conducted at the Höganäs Academy, where the focus is on both personal leadership, business development and the values that are important to Höganäs.

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Risk descriptions	Management
Risks related to technical challenges associated with the climate transition Carbon emissions due to unintended consequences of political incentives. High dependence on bio-based process materials that potentially may be unsustainable in the long term (third-party certification requirement). Bio-based alternatives to fossil process materials are unsuccessful due to process-related technical limitations or lack of availability. Trading with carbon capture and storage (CCS) and negative emissions can be difficult due to scaling and availability.	Höganäs reduces climate-related risks through its systematic implementation of the climate roadmap. Investments in biocoal production to replace fossil coal in core processes, electrification of processes and transport, investments in fossil-free energy and participation in research projects on CCS are part of this implementation.
Safety risks There is an inherent health and safety risk, both physical and psychological, related to Höganäs' own production and outsourced production in a heavy industrial environment with potential fatalities.	Systematic efforts to reduce risks and prevent accidents through a health and safety management system that covers all activities and employees. Production facilities are certified to ISO 45001. Greater emphasis on safety culture where dialogue is crucial.

Financial risks

In addition to the above risks, there are financial risks, which are mainly exchange rate, metal price, energy price (electricity and gas) and interest rate risks. Höganäs Holding's financial policy, which is governed and monitored by Höganäs' Board of Directors, sets out a framework for how financing and different types of financial risks are to be managed. The policy defines the risk exposure at which the business is to be conducted. For further information on Höganäs' financial risks, see Note 28.

Sustainable development

Responsibility for sustainability rests with the Board of Directors and is led by Group management with the help of the Group's sustainability support function. The sustainability agenda is integrated into strategies and business plans, where overall goals are broken down into sub-goals and action plans.

Höganäs' sustainability agenda is centred around five main areas:

- **Climate** with a focus on reducing the company's own and products' impact on the climate
- **Environment** with reduced environmental impact through stable processes and systematic efforts to achieve, among other things, biodiversity around our plants
- **Products** with a focus on sustainable product offerings where resource efficiency and circularity are guiding principles
- **Workplace** with zero vision for accidents
- **Society** with a focus on sustainability in the supply chain and ethical business practices

Climate

The company's climate roadmap includes emissions reduction activities, as well as investment and development plans. Outcomes are reported quarterly to Group management and the Board of Directors. The company's ambition is to achieve net-zero emissions in its own production (Scope 1 and 2) by 2030 and net-zero emissions in the value chain (Scope 1, 2 and upstream Scope 3) by 2037.

Compared to the base year 2018, direct emissions (Scope 1) from fuels and raw materials have decreased by 25 percent, which is due to lower production volumes, more efficient energy use in our production processes and increased use of biofuels. Replacing fossil coal with biocoal in the sponge iron process is another step in achieving the goal for Scope 1, and in 2023 full-scale testing was carried out with good results.

Scope 2 emissions, i.e. from electricity, have decreased to near zero due to the transition to 100 percent fossil-free electricity. Total emissions in both Scope 1 and 2 were down 46 percent compared to 2018.

The work to reduce Scope 3 emissions is focused primarily on raw materials, which account for 80 percent of upstream emissions. In total, Scope 3 emissions have decreased by 25 percent compared to 2018.

Environment

Höganäs conducts production activities that are subject to permits and notification, and are subject to environmental legislation in the countries in which it operates. Permits exist for all production facilities and govern mainly production volume, emissions to air and water, noise and waste. Permits are valid for a certain period or until further notice. Höganäs works continually on the ongoing renewal of the environmental permits it holds in accordance with applicable laws and regulations. There were no changes in terms of permits during the year.

Products

Customers are to an increasing extent demanding information about the climate impact of products, hence the work on climate footprints and life cycle analyses was prioritised in 2023. An analysis of the product Somaloy® to assess its carbon footprint is the first to be verified by an external independent third party.

Höganäs works to turn side stream products into useful resources. In 2023, 125,300 tons of side stream products were generated, of which approximately 79 percent was used. The goal is for 95 percent of the side stream products to be used, internally or externally, by 2026.

Health and safety

Höganäs' vision is that no one should be injured at work and Höganäs has a systematic approach to health and safety in order to create a safe workplace. The number of accidents has been falling for several years, but in the last three years the trend has reversed. In the 2023 financial year, the number of accidents involving absence increased from 30 in 2022 to 31 in 2023. This corresponds to an accident rate of 7.2 per million hours worked, which is an increase from last year's result of 6.9 accidents per million hours worked. The safety culture survey that was carried out showed the need to

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intensify efforts and further strengthen the work of changing behaviours and attitudes.

Society

Risks at the supplier level are managed systematically using Höganäs' Responsible Sourcing programme. This includes policies and procedures for conducting assessments and minimising risks related to human rights, anti-corruption, conflict minerals and cobalt.

Sustainability reporting

Höganäs reports its sustainability work as part of its annual report and in accordance with the Swedish Annual Accounts Act based on the Non-Financial Reporting Directive (NFRD). The Sustainability Report has been prepared in a separate report from the management report in order to meet the statutory sustainability reporting requirements in accordance with Chapter 6 (11) of the Swedish Annual Accounts Act. The content of the Sustainability Report is shown in the table of contents and GRI index presented on pages 110–116 of this report. The auditors' opinion on the statutory Sustainability Report can be found on page 101.

Staff

In 2023, the average number of employees in the Höganäs Group amounted to 2,250 (2,360). The number of employees at year-end amounted to 2,278 (2,339). The number of employees decreased with 61 compared to the same time last year. The average number of employees in Sweden amounted to 762 (826), which corresponded to 34 percent (35) of all employees in the Group. For further information on the average number of employees and personnel expenses, please refer to Note 5.

In 2023, Höganäs focused heavily on various training activities for both managers and employees. A new manager module is developed each year for a current topic and is delivered internally by the HR department. The sixth module in the 'Leading in a sustainable way' series focused this year on reinforcing the work on safety culture and an inclusive culture within Höganäs.

As part of Höganäs' work on diversity and inclusion, an e-learning programme entitled 'A sustainable workplace for everyone' was launched. This training, which is mandatory for all employees, will help raise awareness and provide information on what each employee can do to contribute to a more inclusive workplace. A new global communication guide and posters with tips for creating inclusive meetings were produced.

The annual 'Living our behaviours award' for best performance within Höganäs' behaviours Grit, Volition and Candor was presented at the end of the year.

The work of building a feedback culture in Höganäs continued. The method involving quarterly Team check-ins and subsequent dialogue within the team is now a globally established process.

A new global career and development framework 'Grow with Höganäs' was developed and launched during the year. It describes what career paths and development journeys can look like at Höganäs and is intended, among other things, to be used in development dialogues between managers and employees.

A new global development programme (Talent Development Programme) was launched, in which 12 selected employees, 7 men and 5 women from different countries and areas of competence, will be involved in 2024. Group management is the sponsor of this programme.

Incentive scheme

The Board of Directors of Höganäs AB decided on a long-term incentive scheme, with a vesting period from 2023 to 2025. By introducing the scheme, the owners want to create a long-term commitment and sense of involvement through a profit-sharing opportunity for Group management. The incentive scheme means that all members of the Group Management Board can receive an extra bonus in addition to the annual bonus scheme, which expires after a three-year period. The outcome is based on the operating income for the financial years 2023 to 2025 in combination with development goals based on the electrification agenda and sustainability goals within both the environment and diversity and inclusion.

For the duration of the scheme and under certain conditions, Group management can add new participants to the remuneration scheme and they can participate with a pro rata adjustment calculated from the date of employment.

There is an annual bonus scheme for Group management and key positions in the company. The bonus opportunity is linked to the business plan's planned activities and set objectives, but also represents an anchoring to the part of the organisation to which the employee belongs in order to create a greater sense of belonging and a desire to contribute to a successful Höganäs.

All employees who were employed at the beginning of the financial year and who have not left or had their employment terminated at the time of payment are included in the Group's profit-sharing scheme. Provisions are set aside for profit sharing at 15 percent of the operating income of the operating group (Höganäs AB and its subsidiaries) based on an annually established profit-sharing interval. Details of provisions for the year are shown in Note 5. Distribution of profit takes into account the salary level of the respective country.

Outlook

2023 was characterised by the continued effects of Russia's war of aggression against Ukraine. Higher energy and food prices led to higher inflation, which in turn led to higher interest rates and lower disposable income. This affected demand for many products, including rarely bought commodities such as cars.

The aftermath of COVID seems to have disappeared and the previously strained supply chains in the automotive industry have now been corrected.

The availability of both gas and electricity in Europe is good and prices have fallen back. Alternative supply chains for natural gas were established after pipeline deliveries from Russia were either cut off or significantly reduced. In APAC and the Americas, the energy situation was not under as much pressure.

Research company LMC's forecast for 2023 of 90 million vehicles produced was achieved. The number of vehicles powered by combustion engines reached just under 78 million. For 2024, a modest increase to a total of 91 million cars is forecast, with internal combustion engines, which are Höganäs' primary segment, expected to decrease by 1 million units, to 77 million.

Assuming that Höganäs' core market in combustion engine powered vehicles is stable, 2024 is expected to develop in line with 2023. 2023 progressed well for the high alloy offering and growth for 2024 continues to be good.

If inflationary pressures fall further and result in lower interest rates, there is potential for a stronger second half of the year. An end to the war in Ukraine could also result in greater confidence in the future.

In summary, according to its motto, Höganäs continues to steer and control what is possible and adapt to what cannot be influenced. The business is well-equipped to tackle 2024 and when demand increases again, Höganäs is ready.

Significant events after the reporting period

No events, that are considered significant, occurred between the end of the period and the signing of this Annual Report.

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PARENT COMPANY

Business summary

The parent company's activities relate to the management of the shares in Höganäs AB and to assisting with overall financing solutions for Höganäs' operating activities. Intra-group services are also provided. A description of the parent company's financial risks and management strategy is presented in Note 28.

Development of the parent company's operations, earnings and position

Net sales amounted to SEK 6 million (23) and relate to invoicing of intra-group services.

Administrative expenses amounted to SEK 35 million (40) and relate mainly to personnel-related costs.

Earnings from financial net amounted to SEK –216 million (–499), of which external interest expenses amounted to SEK –208 million (–103). The higher interest costs are explained mainly by higher interest rate levels that were off-set partly by lower borrowing. Internal interest expenses increased to SEK –119 million (–46) and are explained by a higher volume of internal loans and an increased level of interest expenses.

Changes in the year's value of interest rate swaps that are not hedged have affected net income by SEK 71 million (–7). The higher interest rate situation result in interest income on the swaps.

Other changes in financial net are mainly attributable to foreign exchange gains and losses, which had a positive impact on earnings of SEK 40 million (–350), due to the strengthening of the Swedish krona towards the end of the year, mainly against the EUR and USD.

Earnings before tax amounted to SEK 64 million (–322) and included Group contributions of SEK 396 million (155) received during the year.

The reported tax expense amounted to SEK –51 million (35) and SEK –35 million is explained by the recognised loss carry-forwards incurred in the previous year.

Net income amounted to SEK 13 million (–287).

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Appropriation of profit

Proposed distribution of profit

The Board of Directors proposes that the available profit of SEK 6,258,993,880 be distributed as follows:

Dividend, 20,000,000 shares x SEK 5 per share	100,000,000
Carried forward	6,158,993,880
Total	**6,258,993,880**

The Board of Directors is of the opinion that the proposed dividend does not prevent the company from fulfilling its obligations in the short or long term, nor from making necessary investments. The proposed dividend can therefore be justified in view of the statements in Chapter 17, Section 3, Sections 2–3 of the Swedish Companies Act (precautionary rule). The Group's debt/equity ratio and liquidity are expected to be maintained at a satisfactory level in view of the proposed dividend.

The Board of Directors certifies that the consolidated accounts have been prepared in accordance with international accounting standards IFRS as adopted by the EU and give a true and fair view of the Group's financial position and earnings. The annual accounts have been prepared in accordance with generally accepted accounting principles and give a true and fair view of the parent company's financial position and earnings.

The Board of Directors' report for the Group and the parent company provides a true and fair overview of the development of the operations, financial position and performance of the Group and the parent company, and describes material risks and uncertainties faced by the parent company and Group companies.

The Board has approved the annual accounts and the consolidated accounts for issue on 25 March 2024. The consolidated income statement, statement of comprehensive income and financial position together with the parent company's income statement, statement of comprehensive income and balance sheet will be subject to confirmation at the Annual General Meeting on 19 April 2024.

Höganäs, 25 March 2024

Erik Urnes
Chairman

Kristian Sildeby
Board member

Our auditor's report was issued on 2 April 2024
Öhrlings PricewaterhouseCoopers AB

Eric Salander
Authorised Public Accountant
Chief auditor

Carl Fogelberg
Authorised Public Accountant

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Consolidated Income Statement

1 January – 31 December

SEK m	Note	2023	2022
Net sales	2	12,334	12,256
Cost of goods sold		–10,116	–9,976
Gross profit		**2,218**	**2,280**
Selling expenses		–644	–743
Administrative expenses		–577	–580
Research and development expenses		–226	–241
Other operating income	3	64	436
Other operating expenses	4	–113	–29
Loss from joint ventures		–6	–2
Operating income	5, 6, 7, 12, 16, 22	**716**	**1,121**
Financial income		113	16
Financial expenses	12	–239	–196
Net financial items	8	**–126**	**–180**
Earnings before tax		**590**	**941**
Tax	9	–213	–162
Net income		**377**	**779**
Net income attributable to			
Parent company shareholders		377	779
Non-controlling interests		0	0
Net income		**377**	**779**

Consolidated Statement of Comprehensive Income

1 January – 31 December

SEK m	Note	2023	2022
Net income		**377**	**779**
Other comprehensive income			
Items that have been or may be reclassified to net income			
Translation differences for the period		–131	598
Hedging of currency risk in foreign operations		38	–350
Cash flow hedges		–153	–35
Tax attributable to items that have been or may be reclassified to net income	9	28	79
Total		**–218**	**292**
Items that cannot be reclassified to net income			
Revaluation of defined benefit pension plans	22	–40	259
Tax attributable to item that cannot be reclassified to net income	9	10	–62
Total		**–30**	**197**
Other comprehensive income for the year		**–248**	**489**
Comprehensive income for the year		**129**	**1,268**
Comprehensive income attributable to			
Parent company shareholders		129	1,268
Non-controlling interests		0	0
Comprehensive income for the year		**129**	**1,268**

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Consolidated Statement of Financial Position

As at 31 December

SEK m	Note	2023	2022
Assets	28		
Intangible assets	10	7,663	7,808
Property, plant and equipment	11, 12	3,882	3,880
Investments in joint ventures		9	15
Non-current receivables	14, 22	131	216
Deferred tax assets	9	344	414
Total fixed assets		**12,029**	**12,333**
Inventories	15	3,423	4,050
Tax assets		82	109
Accounts receivable	16	1,549	1,668
Prepaid expenses and accrued income	17	78	99
Other receivables		233	384
Short-term deposits		3	50
Cash and cash equivalents	18	600	319
Total current assets		**5,968**	**6,679**
TOTAL ASSETS		**17,997**	**19,012**

SEK m	Note	2023	2022
Equity and liabilities			
Equity	19		
Share capital		20	20
Other contributed capital		6,948	6,948
Reserves		600	818
Retained earnings, incl. net income		4,105	3,758
Equity attributable to parent company's shareholders		**11,673**	**11,544**
Non-controlling interests		0	0
Total equity		**11,673**	**11,544**
Liabilities	28		
Non-current interest-bearing liabilities	12, 20	2,774	3,884
Other non-current liabilities	21	311	17
Provision for pensions	22	314	282
Other provisions	23	52	52
Deferred tax liabilities	9	636	729
Total non-current liabilities		**4,087**	**4,964**
Current interest-bearing liabilities	12, 20	179	305
Accounts payable		1,121	1,227
Tax liabilities		38	37
Other liabilities		167	215
Accrued expenses and deferred income	25	730	712
Provisions	23	2	8
Total current liabilities		**2,237**	**2,504**
Total liabilities		**6,324**	**7,468**
TOTAL EQUITY AND LIABILITIES		**17,997**	**19,012**

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Consolidated Statement of Changes in Equity

		Equity attributable to parent company's shareholders								
				Reserves						
SEK m	Note 19	Share capital	Other contributed capital	Translation reserve	Hedging reserve	Remeasure-ment of pensions	Retained earnings, incl. net income	Total	Non-controlling interests	Total equity
Opening equity, 1 Jan. 2022		20	6,948	318	208	30	2,952	10,476	0	10,476
Comprehensive income for the year										
Net income		–	–	–	–	–	779	779	0	779
Other comprehensive income for the year		–	–	320	–28	197	–	489	0	489
Comprehensive income for the year		**–**	**–**	**320**	**–28**	**197**	**779**	**1,268**	**0**	**1,268**
Transactions with the Group's owners										
Dividends paid		–	–	–	–	–	–200	–200	0	–200
Total transactions with the Group's owners		**–**	**–**	**–**	**–**	**–**	**–200**	**–200**	**0**	**–200**
Closing equity, 31 Dec. 2022		**20**	**6,948**	**638**	**180**	**227**	**3,531**	**11,544**	**0**	**11,544**
Opening equity, 1 Jan. 2023		20	6,948	638	180	227	3,531	11,544	0	11,544
Comprehensive income for the year										
Net income		–	–	–	–	–	377	377	0	377
Other comprehensive income for the year		–	–	–97	–121	–30	–	–248	0	–248
Comprehensive income for the year		–	–	**–97**	**–121**	**–30**	**377**	**129**	**0**	**129**
Transactions with the Group's owners										
Dividends paid		–	–	–	–	–	–	–	–	–
Total transactions with the Group's owners		**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Closing equity, 31 Dec. 2023		**20**	**6,948**	**541**	**59**	**197**	**3,908**	**11,673**	**0**	**11,673**

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Consolidated Statement of Cash Flows

1 January – 31 December

SEK m	Note	2023	2022
Operating activities			
Operating income		716	1,121
Adjustment for items not affecting cash flow			
Depreciation and amortisation	10, 11, 12	683	730
Impairment	10, 11, 12	137	23
Unrealised foreign exchange gains and losses		35	8
Capital gain on divestment of operations	31	–	–396
Capital gain on disposal of fixed assets		53	44
Other items		–11	58
Interest received		28	16
Interest paid		–174	–126
Realised foreign exchange gains and losses		23	2
Other financial expenses		–1	–1
Income tax paid		–183	–219
Cash flow from operating activities before changes in working capital		**1,306**	**1,260**
Cash flow from changes in working capital			
Increase (–)/Decrease (+) in inventories		550	–578
Increase (–)/Decrease (+) in operating receivables		194	–128
Increase (+)/Decrease (–) in operating liabilities		–113	108
Cash flow from operating activities		**1,937**	**662**
Investing activities			
Divestment of operations	31	–	338
Acquisition of intangible assets	10	–327	–198
Disposal of intangible assets		213	129
Acquisition of property, plant and equipment	11	–514	–462
Disposal of property, plant and equipment		6	19
Acquisition of financial assets		–11	–12
Disposal of financial assets		–	16
Disposal of financial investment		55	–
Cash flow from investing activities		**–578**	**–170**

SEK m	Note	2023	2022
Financing activities			
Proceeds from borrowing	31	3,581	775
Repayment of borrowings	31	–4,794	–879
Repayment of lease liabilities	31	–101	–94
Increase in other non-current liabilities	31	261	0
Dividend paid		–	–200
Cash flow from financing activities		**–1,053**	**–398**
Cash flow for the year		**306**	**94**
Cash and cash equivalents at the beginning of the year		319	212
Exchange rate differences in cash and cash equivalents		–25	13
Cash and cash equivalents at the end of the year	18	**600**	**319**

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Income Statement, parent company

1 January – 31 December

SEK m	Note	2023	2022
Net sales		6	23
Administrative expenses		–35	–40
Operating income	5, 6, 12, 29	**–29**	**–17**
Earnings from financial income/expense			
Interest and similar income	8	111	0
Interest and similar expenses	8	–327	–499
Earnings after financial income/expense	29	**–245**	**–516**
Appropriations			
Group contributions		396	155
Tax allocation reserves		–87	39
Earnings before tax		**64**	**–322**
Tax	9	–51	35
Net income		**13**	**–287**

Statement of Comprehensive Income, parent company

1 January – 31 December

SEK m	Note	2023	2022
Net income		13	–287
Other comprehensive income			
Items that have been or may be reclassified to net income			
Interest rate derivatives		–93	184
Tax attributable to other comprehensive income	9	19	–37
Other comprehensive income for the year		**–74**	**147**
Comprehensive income for the year		**–61**	**–140**

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Balance Sheet, parent company

As at 31 December

SEK m	Note	2023	2022
Assets			
Fixed assets			
Financial assets			
Shares in Group companies	13	11,829	11,829
Non-current receivables		69	154
Deferred tax assets	9	0	9
Total financial assets		**11,898**	**11,992**
Total fixed assets		**11,898**	**11,992**
Current assets			
Current receivables			
Receivables from Group companies	29	3	0
Tax assets		5	23
Other receivables		18	11
Prepaid expenses and accrued income	17	1	0
Total current receivables		**27**	**34**
Cash and cash equivalents	18	0	0
Total current assets		**27**	**34**
TOTAL ASSETS		11,925	12,026

SEK m	Note	2023	2022
Equity and liabilities			
Equity	19		
Restricted equity			
Share capital		20	20
Unrestricted equity			
Share premium reserve		686	686
Fair value reserve		56	130
Retained earnings		5,504	5,791
Net income		13	–287
Total equity		**6,279**	**6,340**
Untaxed reserves			
Tax allocation reserves		87	–
Total untaxed reserves		**87**	**–**
Provisions			
Deferred tax liabilities	9	4	–
Other provisions	23	7	6
Total provisions		**11**	**6**
Non-current liabilities			
Liabilities to credit institutions	24	2,492	3,626
Liabilities to Group companies	29	2,994	1,991
Other non-current liabilities	21	18	–
Total non-current liabilities		**5,504**	**5,617**
Current liabilities			
Accounts payable		1	1
Liabilities to Group companies	29	25	51
Tax liabilities		–	–
Other liabilities		2	1
Accrued expenses and deferred income	25	16	10
Total current liabilities		**44**	**63**
TOTAL EQUITY AND LIABILITIES		11,925	12,026

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Statement of Changes in Equity, parent company

		Restricted equity	Unrestricted equity			
SEK m	**Note 19**	**Share capital**	**Share premium reserve**	**Fair value reserve**	**Retained earnings including net income**	**Total equity**
Opening equity, 1 Jan. 2022		20	686	–17	5,991	6,680
Comprehensive income for the year						
Net income		–	–	–	–287	–287
Other comprehensive income for the year		–	–	147	–	147
Comprehensive income for the year		**–**	**–**	**147**	**–287**	**–140**
Transactions with shareholders						
Dividends paid		–	–	–	–200	–200
Total transactions with shareholders		**–**	**–**	**–**	**–200**	**–200**
Closing equity, 31 Dec. 2022		**20**	**686**	**130**	**5,504**	**6,340**
Opening equity, 1 Jan. 2023		20	686	130	5,504	6,340
Comprehensive income for the year						
Net income		–	–	–	13	13
Other comprehensive income for the year		–	–	–74	–	–74
Comprehensive income for the year		**–**	**–**	**–74**	**13**	**–61**
Transactions with shareholders						
Dividends paid		–	–	–	–	–
Total transactions with shareholders		–	–	–	–	–
Closing equity, 31 Dec. 2023		**20**	**686**	**56**	**5,517**	**6,279**

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Cash Flow Statement, parent company

1 January – 31 December

SEK m	Note	2023	2022
Operating activities			
Operating income		–29	–17
Adjustment for items not affecting cash flow			
Provisions etc.		0	0
Interest received		0	0
Interest paid		–265	–143
Realised foreign exchange gains and losses		2	0
Income tax paid		–1	–23
Cash flow from operating activities before changes in working capital		**–293**	**–183**
Cash flow from changes in working capital			
Increase (–)/Decrease (+) in operating receivables		3	–2
Increase (+)/Decrease (–) in operating liabilities		7	–5
Cash flow from operating activities		**–283**	**–190**
Investing activities			
Proceeds from/lending to subsidiaries		1,369	513
Cash flow from investing activities		**1,369**	**513**
Financing activities			
Proceeds from borrowing	31	3,581	725
Repayment of borrowings	31	–4,667	–848
Dividend paid		–	–200
Cash flow from financing activities		**–1,086**	**–323**
Cash flow for the year		**0**	**0**
Cash and cash equivalents at the beginning of the year		0	0
Cash and cash equivalents at the end of the year	18	**0**	**0**

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Notes to the financial statements

Note 1 Significant accounting policies

(a) Compliance with standards and law

The consolidated accounts have been prepared in accordance with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and interpretative statements from the International Financial Reporting Interpretations Committee (IFRIC) as adopted by the EU. In addition, the Swedish Financial Reporting Board's recommendation RFR 1 Supplementary Accounting Rules for Groups has been applied.

The parent company applies the same accounting policies as the Group, except in the cases described below in the section entitled 'Parent company's accounting policies'.

The Board of Directors has approved the annual accounts and consolidated accounts for issue on 25 March 2024.

The consolidated income statement, statement of comprehensive income and statement of financial position together with the parent company's income statement, statement of comprehensive income and balance sheet will be subject to confirmation at the Annual General Meeting on 19 April 2024.

(b) Valuation principles applied in preparing the financial statements

Assets and liabilities are reported at historical cost, apart from certain financial assets and liabilities which are measured at fair value. Financial assets and liabilities measured at fair value consist of derivative instruments. A defined benefit pension liability/asset is recognised at the net of the fair value of plan assets and the present value of the defined benefit liability, adjusted for any asset restrictions.

(c) Functional currency and reporting currency

The parent company's functional currency is Swedish kronor, which is also the reporting currency for the parent company and for the Group. Consequently, the financial statements are presented in Swedish kronor. All amounts are in millions of Swedish krona (SEK million) unless otherwise stated.

(d) Judgements and estimates in the financial statements

Preparation of financial statements in compliance with IFRS requires management to make critical judgements, accounting estimates and assumptions which affect the application of the accounting policies and the carrying amounts of assets, liabilities, income and expense. The actual outcome may differ from these estimates.

The accounting estimates and assumptions are reviewed regularly. Changes in accounting estimates are recognised in the period of the change if the change only affects that period. Changes are recognised in the period of the change and future periods if the change affects both.

Assessments made by management when applying IFRS which have a significant influence on the financial statements and estimates and may result in material adjustments to the following year's financial statements are reviewed in more detail in Note 30.

(e) Key accounting policies applied

The accounting policies described below have been applied consistently to all periods presented in the parent company's financial statements. The Group's accounting policies have been consistently applied by Group companies.

(f) Revised accounting policies resulting from amendments to or new IFRS

None of the new or revised standards, interpretations or improvements issued by the International Accounting Standards Board (IASB) or IFRS Interpretations Committee (IFRIC) and adopted by the EU in 2023 had any significant impact on the Group.

(g) New IFRS and interpretations yet not adopted

No new or amended standards and interpretations issued by the International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRIC) and entering into force for financial years beginning after 1 January 2023 were adopted when preparing these financial statements. Based on known information, new or amended standards and new interpretations, which have not entered into force as of 31 December 2023, are not deemed to have a significant effect on the Group's financial statements.

(h) Classification

Fixed assets and non-current liabilities essentially comprise amounts that are expected to be recovered or paid more than twelve months after the reporting date. Current assets and liabilities essentially comprise amounts that are expected to be recovered or paid within twelve months of the reporting date.

(i) Basis of consolidation

(i) Subsidiaries

Subsidiaries are entities over which Höganäs AB has a controlling interest. Control exists when the company has the power, directly or indirectly, to govern the financial and operating policies of an entity so as to obtain benefits from its activities. When assessing whether control exists, potential voting rights that are currently exercisable or convertible are taken into consideration.

The financial statements of a subsidiary are included in the consolidated accounts from the date of acquisition until the date on which the controlling interest ceases.

In cases where the subsidiary's accounting policies are not consistent with the Group's accounting policies, adjustments have been made in line with the Group's accounting policies.

Business combinations

Business combinations are accounted for using the acquisition method. The acquisition of a subsidiary is treated as a transaction through which the Group indirectly acquires the subsidiary's assets and assumes its liabilities. The fair value of acquired identifiable assets, assumed liabilities and any non-controlling interests on the

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acquisition date is determined in the purchase price allocation. Transaction expenses, apart from transaction expenses attributable to the issue of equity or debt instruments, are recognised directly in net income.

In business combinations where transferred consideration, any non-controlling interests and the fair value of previously owned shares (in step acquisitions) exceed the fair value of acquired assets and assumed liabilities that are reported separately, the difference is recognised as goodwill. When the difference is negative, it is recognised directly in net income.

Transferred consideration in connection with acquisitions do not include payments relating to the settlement of previous business relationships. This type of settlement is recognised in profit or loss.

Contingent considerations are recognised at fair value on the acquisition date. In cases where the contingent consideration is classified as an equity instrument, there is no revaluation and adjustment is made within equity. Other contingent considerations are revalued at each reporting date and changes are recognised in net income.

In cases where the acquisition does not relate to 100 percent of the subsidiary, a non-controlling interest arises. There are two alternatives for reporting non-controlling interests. These two alternatives are to report the non-controlling interest's share of proportional net assets or to report non-controlling interests at fair value, which means that non-controlling interests have a share in goodwill. The choice between these two alternatives for reporting non-controlling interests can be made acquisition by acquisition.

In step acquisitions, goodwill is determined on the date on which the controlling interest is obtained. Previous holdings are measured at fair value, with changes in value recognised in net income.

For divestments resulting in the loss of controlling interest, but where there is a remaining holding, this holding is reported at fair value and the change in value is recognised in net income.

Acquisitions of non-controlling interests
Acquisitions of non-controlling interests are reported as a transaction in equity, i.e. between the parent company's owners (in retained earnings) and non-controlling interests. Therefore, goodwill does not arise in these transactions. The change in non-controlling interests is based on their proportional share of net assets.

Sales to non-controlling interests
Sales to non-controlling interests, where controlling interest is retained, are reported as a transaction in equity, i.e. between the parent company's owners and non-controlling interests. The difference between the proceeds received and the non-controlling interest's proportional share of the acquired net assets is recognised under retained earnings.

(ii) Joint ventures
Joint ventures are, for reporting purposes, companies where the Group, under agreements with one or more parties, has joint control over the operating and financial management. In the consolidated accounts, holdings in joint ventures are consolidated in accordance with the equity method.

Under the equity method, the carrying amount of participations in joint ventures in the Group corresponds to the Group's share in the joint ventures' equity, Group goodwill and any other remaining consolidated surplus or deficit.

The Group's share in the joint venture's profit/loss, adjusted for any depreciation/amortisation, impairment losses and utilisation of acquired surpluses or deficits are recognised in the Group's net income as 'Profit/loss from joint ventures'. This profit sharing less dividends received from joint ventures constitutes the main change to the carrying amount for participations in joint ventures.

The Group's share in other comprehensive income in joint ventures is reported on a separate line in the Group's other comprehensive income. The equity method is applied from the date on which control is obtained until the date on which it ceases.

(iii) Transactions eliminated on consolidation
Intra-Group receivables and liabilities, income and expenses, and unrealised gains or losses arising from intra-Group transactions are eliminated in full when preparing the consolidated financial statements.

(j) Foreign currency
(i) Foreign currency transactions
Foreign currency transactions are translated to the functional currency using the exchange rates prevailing at the transaction date. The functional currency is the currency in the primary economic environments in which the companies conduct their business. Foreign currency monetary assets and liabilities are translated into the functional currency using the exchange rates prevailing at the reporting date. Foreign exchange gains and losses arising on translation are recognised in net income. Non-monetary assets and liabilities recognised at historical cost are translated using the exchange rate prevailing at the transaction date.

Non-monetary assets and liabilities recognised at fair value are translated to the functional currency at the rate prevailing at the time of measurement at fair value.

(ii) Financial statements of foreign operations
Assets and liabilities of foreign operations, including goodwill and other consolidated surpluses and deficits, are translated from the functional currency of the foreign operations to the Group's reporting currency, Swedish kronor, using the exchange rate prevailing at the reporting date.

Income and expenses of foreign operations are translated to Swedish kronor using average exchange rates. This average is an approximation of the cumulative effect of the rates at each transaction date.

Translation differences arising on the currency translation of foreign operations are recognised in other comprehensive income and accumulated in a separate component of equity, termed the translation reserve. On divestment of a foreign operation, the cumulative translation differences relating to that operation, net of any hedging, are reclassified from the translation reserve in equity to net income.

(iii) Net investment in a foreign operation
In practice, monetary non-current receivables and liabilities to a foreign operation for which settlement is not planned and is unlikely to occur in the foreseeable future are part of Höganäs' net investment in foreign operations.

A translation difference arising on a non-current monetary receivable/liability is recognised in other comprehensive income and accumulated in a separate component of equity, termed the translation reserve.

On divestment of a foreign operation, the cumulative translation difference relating to non-current monetary receivables/liabilities are included in the cumulative translation differences reclassified from the translation reserve in equity to net income.

(k) Net sales
(i) Sale of goods
Income from the sale of goods relates mainly to the sale of metal powder. Höganäs recognises income once it has fulfilled its obliga-

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tion to transfer the promised goods to the customer, i.e. when the customer gains control of the goods. According to current agreements with customers, this occurs essentially at the time of delivery. Reported income is adjusted by deducting the expected discounts. Normal credit terms apply in the respective market where the customer is located.

(ii) Government grants

Government grants are reported in the statement of financial position as deferred income and other long-term liabilities respectively when there is reasonable certainty that the grant will be received and that the Group will satisfy the conditions associated with the grant. Grants are subject to systematic allocation to net income in the same way and in the same periods as the expenses the grant is intended to off-set.

Government grants relating to fixed assets are recognised in the statement of financial position as deferred income and other non-current liabilities respectively and are allocated as other operating income over the useful life of the asset.

(l) Financial income and expenses

Financial income comprises interest income on invested funds, dividend income, gains arising from changes in the value of financial assets measured at fair value through profit or loss as well as gains on hedging instruments that are recognised in net income.

Interest income from financial instruments is recognised in accordance with the effective interest method (see below). Dividend income is recognised when the right to receive dividends is established. Income from the disposal of a financial instrument is recognised when the risks and rewards associated with ownership of the instrument have been transferred to the buyer and the Group no longer has control over the instrument.

Financial expenses comprise interest costs on borrowing and lease liabilities, the effect of reversal of the present value calculation of provisions, losses caused by changes in the value of financial assets measured at fair value through profit or loss, impairment of financial assets and losses on hedging instruments that are recognised in net income. Borrowing costs are recognised in profit or loss using the effective interest method apart from to the extent that they are directly attributable to purchases, construction or production of assets that require a significant amount of time to complete for their intended use or sale, in which case they are included in the cost of assets.

Exchange gains and losses are reported net. Effective interest is the interest that discounts the estimated future payments received and made during the expected term of a financial instrument at the net carrying amount of the financial asset or liability. The calculation includes all charges paid or received by the contracting parties that are part of the effective interest, transaction expenses and all other discounts and premiums.

(m) Taxes

Income tax consists of current tax and deferred tax. Income tax is recognised in net income, unless the underlying transaction is recognised in other comprehensive income or in equity, in which case the associated tax effect is recognised in other comprehensive income or in equity.

Current tax is tax to be paid or received for the current year, by applying the tax rates that have been enacted or substantively enacted as of the reporting date. Current tax also includes adjustments of current tax attributable to previous periods.

Deferred tax is measured using the balance sheet method. A deferred tax liability is recognised for temporary differences between the carrying amounts of assets and liabilities and their corresponding tax bases. Temporary differences are not taken into account in consolidated goodwill and nor are differences arising on first reporting of assets and liabilities that are not business combinations, which at the time of the transaction affect neither reported nor taxable income. Furthermore, temporary differences attributable to interests in subsidiaries that are not expected to be reversed in the foreseeable future are not taken into account either. The measurement of deferred tax is based on how the company expects to recover or settle the carrying amount of its underlying assets and liabilities. Deferred tax is calculated using the tax rates and tax rules that have been enacted or substantively enacted as at the reporting date.

Deferred tax assets on temporary differences and deferred tax assets arising from tax losses carry-forwards are only recognised to the extent that it is probable that they can be utilised. The carrying amounts of deferred tax assets are reduced to the extent that the losses are expected to be utilitsed.

Any additional income tax arising from dividends is recognised at the same time as the dividend is reported as a liability.

(n) Financial instruments

Financial instruments reported in the statement of financial position include cash and cash equivalents, accounts receivable, other receivables and derivatives. Liabilities include accounts payable, loan and derivatives.

Cash and cash equivalents consist of cash, demand deposits with banks and similar institutions and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

(i) Recognition and derecognition from the statement of financial position

A financial asset or liability is recognised in the statement of financial position when the company becomes party to the contractual provisions of the instrument.

Accounts receivable are recognised in the statement of financial position when the invoice has been sent. A liability is recognised when the counterparty has performed and there is a contractual obligation to pay, even if an invoice has not yet been received. Accounts payables are recognised on receipt of the invoice.

Financial assets are derecognised from the statement of financial position when the rights to receive benefits have been realised, expire or the company relinquishes control over them. The same applies to a component of a financial asset. Financial liabilities are derecognised from the statement of financial position when the contractual obligation has been discharged or extinguished in some other way. The same applies to a component of a financial liability. A financial asset and a financial liability are off-set and reported at a net amount in the statement of financial position only when there is a legal right to off-set the amounts and the intention is to settle the items at a net amount or to simultaneously realise the asset and settle the liability.

Purchases and sales of financial assets are reported on the transaction date, which is the date the company undertakes to buy or sell the asset.

(ii) First-time measurement

Financial instruments are initially recognised at fair value with additions/deductions for transaction expenses, apart from instruments that are measured at fair value through profit or loss on an ongoing basis for which transaction expenses are instead recognised as an expense as they arise. Accounts receivable (without a significant

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financing component) are initially measured at the transaction price determined in accordance with IFRS 15.

(iii) Classification and subsequent measurement of financial assets

All of the Group's financial assets, apart from derivative assets, are measured at amortised cost after initial recognition. This is because they are held in the context of a business model whose objective is to obtain the contractual cash flows while the cash flows from assets consist only of payments of principal and interest. Derivative assets are measured at fair value in the statement of financial position, see also the section 'Derivatives and hedge accounting' below.

(iv) Classification and subsequent measurement of financial liabilities

All financial liabilities, apart from derivative liabilities, are classified as measured at amortised cost. Derivative liabilities are measured at fair value in the statement of financial position, see also the section 'Derivatives and hedge accounting' below.

(o) Derivatives and hedge accounting

The Group's derivative instruments have been acquired to financially hedge the risk of interest rate, raw material and currency exposure to which the Group is exposed. Embedded derivatives are reported separately if they are not closely related to the host contract. Derivatives are initially recognised at fair value, with transaction costs recognised in the income statement. After initial recognition, derivative instruments are measured at fair value and changes in fair value are recognised as stated below.

To meet the requirements for hedge accounting under IAS 39, there must be a clear link to the hedged item. In addition, the hedge must effectively protect the hedged item, hedging documentation must be prepared and its effectiveness must be measurable. Changes in value of effective hedging instruments are recognised in other comprehensive income and accumulated in individual components in equity. However, if ineffectiveness occurs in the hedging relationship, the ineffective portion of the change in value of the hedging instrument is reported directly in net income. Gains and losses attributable to hedges are recognised in net income at the same time as gains or losses attributable to the hedged items.

Hedge accounting is applied in the following areas:

- to currency derivatives used for hedging future payments in foreign currency (cash flow hedging)
- to commodity derivatives and currency derivatives used for hedging purchases and sales of raw materials (cash flow hedging)
- to interest rate swaps where the variable interest rate of the borrowing is converted to a fixed interest rate (cash flow hedging)
- to net foreign investments in subsidiaries where loans are used as hedging instruments and are revalued in other comprehensive income.

(i) Foreign currency receivables and liabilities

Currency forwards are used to hedge assets or liabilities against currency risk. Hedge accounting is not applied for hedging against currency risk, as financial hedging is reflected in reporting by both the underlying receivable or liability and the hedging instrument being recognised at the exchange rate on the reporting date and exchange rate fluctuations being recognised in net income.

Exchange rate fluctuations relating to operating assets and liabilities are recognised in operating income, while exchange rate fluctuations relating to financial assets and liabilities are recognised in net financial income or expense.

(ii) Cash flow hedges of uncertainty in forecast foreign currency sales

The currency forwards used for hedging highly probable forecast sales in foreign currency are recognised in the statement of financial position at fair value.

Changes in value for the period are recognised in other comprehensive income and the cumulative changes in value in a separate component of equity (hedging reserve) until the hedged flow affects net income, whereby the cumulative changes in value of the hedging instrument are reclassified to net income in connection with the hedged item (sales revenue) affecting net income.

(iii) Cash flow hedging of interest rate risk

To hedge the uncertainty associated with highly probable forecast interest flows relating to borrowing at variable interest rates, interest rate swaps are used, with the company receiving a variable interest rate and paying a fixed interest rate. The interest rate swaps are measured at fair value in the statement of financial position. The interest coupon portion is recognised in net income under interest expenses.

Unrealised changes in the fair value of interest rate swaps are recognised in other comprehensive income and included as part of the hedging reserve until the hedged item affects net income and for as long as the criteria for hedge accounting and effectiveness are met.

Hedges with a direct impact on reference rate reforms

It is assumed for cash flow hedges of forecast transactions that the reference rate is not changed by reference rate reforms, when assessing whether a forecast transaction is highly probable and exposes the Group to variations in cash flows that have the potential to affect profit or loss. The same is true when assessing whether a forecast transaction in an interrupted cash flow hedge relationship is still expected to occur.

These specific principles for the management of reference rate reforms will cease to be used when the reforms no longer entail any uncertainties regarding the timing of reference rate-based cash flows and for the assessment of whether forecast cash flows are highly probable.

(iv) Hedging of currency risk in foreign net investments

Investments in foreign subsidiaries (net assets including goodwill) have been partially hedged by raising foreign currency loans, which are translated on the reporting date using the exchange rate prevailing at the reporting date.

Translation differences for the period on financial instruments used as hedging instruments in a hedge of a net investment in a Group company are recognised, insofar as the hedge is effective, in other comprehensive income and the accumulated changes in a separate component of equity (translation reserve). The aim is to neutralise the translation differences that affect other comprehensive income when Group companies are consolidated.

(v) Hedging of raw material risk and electricity price risk

Hedging is carried out using standard financial derivative instruments listed daily on the London Metal Exchange (LME). For the metals not listed on LME, hedging can take place through physical fixed price agreements with suppliers. Electricity price hedging uses standard forward contracts listed on Nord Pool.

Changes in value are recognised directly in other comprehensive income in the hedging reserve until the hedged cash flow is realised. The hedging instrument's accumulated changes in value are then recycled to profit or loss in order to meet and match the profit or loss

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effects from the hedged transaction. Hedged cash flows may relate to firm commitments or forecast transactions.

(p) Property, plant and equipment

(i) Owned assets

Property, plant and equipment are recognised in the Group at acquisition value less accumulated depreciation and impairment losses. Acquisition value comprises the purchase price and any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended. Examples of directly attributable costs included in the acquisition value are costs for delivery and handling, installation, registration, consultancy services and legal services. Borrowing costs directly attributable to the purchase, construction or production of the asset that require a significant amount of time to complete for its intended use or sale are included in the acquisition value.

Accounting policies for impairment are described below.

The cost of fixed assets produced by the company includes expenses for materials, expenses for employee benefits, and, if applicable, other production overheads that are considered directly attributable to the fixed asset, as well as estimated expenses for disassembling and removing the assets and restoring the site or area where they are located.

Parts of property, plant and equipment that have different useful lives are treated as separate components of property, plant and equipment.

The carrying amount of an item of property, plant and equipment is removed from the statement of financial position in connection with retirement or disposal, or when no future financial benefits are expected from the use or the retirement/disposal of the asset. The gain or loss arising from the disposal of an asset is the difference between the selling price and the asset's carrying amount less direct costs to sell. Gains and losses are reported under other operating income/expense.

(ii) Subsequent costs

Subsequent costs are included in the acquisition value only when it is probable that future economic benefits associated with the asset will flow to the company and the acquisition value can be measured reliably. All other subsequent costs are recognised as an expense in the period in which they are incurred.
A subsequent cost is added to the acquisition value if the cost relates to the replacement of identified components or parts thereof. Costs relating to the construction of new components are also included in the carrying amount. The residual value of a replaced component or part thereof is derecognised at the time of replacement. Repairs are recognised as an expense as incurred.

(iii) Borrowing costs

Borrowing costs that are attributable to the construction of qualifying assets are capitalised as part of the cost of the qualifying asset. A qualifying asset is an asset that necessarily takes a significant length of time to prepare for its intended use. Firstly, borrowing costs incurred on loans that are specific to the qualifying asset are capitalised. Secondly, borrowing costs incurred on general loans that are not specific to any other qualifying asset are capitalised. Capitalisation of borrowing costs is primarily relevant for the Group in connection with its own construction of warehouses, production buildings and furnaces.

(iv) Depreciation

Depreciation takes place on a straight-line basis over the estimated useful life of assets. Land is not depreciated. The Group applies component depreciation, which means depreciation is based on the estimated useful lives of components.

Estimated useful lives:

• Buildings, commercial properties	20–33 years
• Plant and machinery	5–15 years
• Equipment, tools, fixtures and fittings	3–5 years

Plant and machinery comprises a number of components with different useful lives, mainly between 5 and 15 years. The majority of these components take the form of operator units in production processes with an estimated useful life of 10 years. Belt furnaces and tunnel kilns are assessed as principal assets and their useful life has been assessed at 15–30 years. The residual value and useful life of an asset are assessed annually.

(q) Leasing

When a contract is entered into, an assessment is made as to whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract transfers the right to control the use of an identified asset for a certain period of time in exchange for payment.

In assessing whether a contract transfers the right to control the use of an identified asset, consideration is given to whether the Group, in all material respects, receives the economic benefits from the use of the asset over the entire lease term, but also whether the Group has the right to control the use of the asset. This arises when the Group has the right to decide how and for what purpose the asset is used.

(i) Leases where the Group is lessee

The Group recognises a right-of-use asset and a lease liability on the lease start date. Right-of-use assets are initially measured at acquisition value, which consists of the initial value of the lease liability plus lease payments made on or before the start date plus any initial direct expenses.

Right-of-use assets are depreciated on a straight-line basis from the start date until the end of the asset's useful life or the end of the lease period, whichever comes first. For the Group, this is normally the end of the lease term. In rarer cases where the acquisition value of a right-of-use asset reflects that Höganäs will exercise an option to purchase the underlying asset, the asset is written off until the end of its useful life.

Lease liabilities, divided into non-current and current, are initially measured at the present value of the remaining lease payments for the estimated lease period.

The lease period consists of the period during which the lease may not be terminated plus additional periods in the contract if it is deemed on the start date to be reasonably certain that these will be used. The Group has identified a number of contracts, primarily relating to properties, that are open-ended and without a clearly defined end date or without limitations in terms of the number of possible extension options. This requires Höganäs, as a lessee, to determine a reasonable contract period instead of considering the termination clause. Höganäs determines the length of the contract period based on factors such as the importance of the property to the business, any planned or completed leasehold investments and the property market situation.

In order to harmonise the principle for determining discount rates by subsidiaries, Höganäs has introduced a Group-wide model for calculating discount rates. This is based on the individual country's risk-free interest rate plus a business-specific risk premium. Based on the term of each individual contract, an individual marginal borrowing rate is then determined for the specific contract.

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Lease liabilities include the present value of the following expenses during the estimated lease term:

- fixed costs,
- variable lease payments linked to an index or price, initially valued using the index or price in force on the start date;
- any residual value guarantees expected to be paid;
- the exercise price of a call option that Höganäs is reasonably certain to exercise; and
- penalties payable upon termination of the lease if the estimated lease term reflects that such termination will take place.

The value of the liability is increased by the interest cost for the respective term and reduced by the lease payments. The interest cost is calculated as the value of the liability multiplied by the discount rate.

Right-of-use assets and lease liabilities are not reported for leases with a term of 12 months or less or leases with an underlying asset of low value, less than USD 5,000. Lease payments for these leases are recognised as an expense on a straight-line basis over the lease term.

(r) Intangible assets

(i) Goodwill

The consideration transferred in a business combination is measured at fair value. Goodwill is the amount by which the acquisition value (consideration) exceeds the fair value of the Group's share of the acquired subsidiary's identifiable net assets at the time of acquisition, which are not individually identified and reported separately. The Group's goodwill is essentially attributable to the parent company's acquisition of Höganäs AB (publ), in which a controlling interest arose on 27 August 2013.

Goodwill is tested annually for impairment and reported at acquisition value less accumulated impairment (see accounting policies (t)). Impairment is also tested in cases where there are indications that the asset may have decreased in value. Goodwill is allocated to cash-generating units when testing for impairment. Allocation is made to the cash-generating units or groups of cash-generating units that are expected to benefit from the business combination that gave rise to the goodwill item. The cash-generating unit for which impairment testing is carried out has been identified as the operational Höganäs Group. The integration work for the businesses acquired in the 2018 financial year has been completed and these are now fully integrated into the existing Höganäs Group.

Impairment of goodwill is recognised as an expense and is not reversed. In the case of business combinations where the acquisition value is less than the net value of the acquired assets and assumed liabilities and contingent liabilities, the difference is recognised directly in net income.

(ii) Trademarks

The Group's carrying amount for trademarks with an indefinite useful life is essentially attributable to the acquisition of Höganäs' business operations. These trademarks are not depreciated but are tested annually for impairment and are reported at acquisition value less accumulated impairment (see accounting policies (t)). Impairment is also tested in cases where there are indications that the asset may have decreased in value.

The Group's carrying amount for trademarks with a finite useful life is recognised at acquisition value less accumulated depreciation. Depreciation is carried out on a straight-line basis to distribute the cost over the estimated useful life of two years.

(iii) Technical know-how

The Group's carrying amount for technical know-how is essentially attributable to the acquisition of Höganäs' business operations. Acquired technical know-how has a finite useful life and is recognised at acquisition value less accumulated depreciation. Depreciation is carried out on a straight-line basis to distribute the cost over their estimated useful life of 10 years.

(iv) Customer relationships

The Group's carrying amount for customer relationships is essentially attributable to the acquisition of Höganäs' business operations. Acquired customer relationships are recognised at acquisition value. Customer relationships have a finite useful life and are recognised at acquisition value less accumulated depreciation. Depreciation is carried out on a straight-line basis to distribute the cost of customer relationships over their estimated useful life of 10 years.

(v) Research and development

Expenses for research intended to secure new scientific or technical knowledge are recognised as costs when they arise.

Expenses for development, where research outcomes or other knowledge are used to achieve new or improved products or processes, are recognised as an asset in the statement of financial position, if the product or process is technically and commercially usable and the company has sufficient resources to complete the development and then use or sell the intangible asset. The carrying amount includes all directly attributable expenses; for example, for materials and services, employee benefits, registration of a legal right, amortisation of patents, licences and borrowing costs in accordance with IAS 23. Other development expenses are recognised in net income as costs when they arise. Recognised development expenses are recognised in the statement of financial position at acquisition value less accumulated depreciation and any impairment losses.

A large part of the Group's development costs relate to specific customer projects. In cases where it is assessed that the development projects are highly likely to give rise to future economic benefits, they are recognised in the balance sheet. The timing of depreciation begins when the product is finished and brought into general use.

The useful life for each project is estimated and determined by management and is normally around 3–10 years. Each project's useful life and indications of impairment are assessed annually.

(vi) Other intangible assets

Other intangible assets acquired by the Group are reported at acquisition value less accumulated depreciation (see below) and impairment losses (see accounting policies (t)).

Costs incurred for internally generated goodwill and internally generated trademarks are recognised in net income when incurred.

(vii) Additional costs

Additional costs for capitalised intangible assets are recognised as an asset in the statement of financial position only when they increase the future economic benefits of the specific asset to which they relate. All other costs are recognised as an expense as they are incurred.

(iii) Borrowing costs

Borrowing costs that are attributable to the construction of qualifying assets are capitalised as part of the cost of the qualifying asset. A qualifying asset is an asset that necessarily takes a significant length of time to prepare for its intended use. Firstly, borrowing costs incurred on loans that are specific to the qualifying asset are capitalised. Secondly, borrowing costs incurred on general loans that are not specific to any other qualifying asset are capitalised. Capitalisation of borrowing costs is primarily relevant for the Group with regard to capitalised development expenses for the development of new computer systems.

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(iv) Depreciation
Amortisation is recognised in net income on a straight-line basis over the estimated useful lives of intangible assets, unless such useful lives are indefinite. Goodwill and intangible assets with an indefinite useful life (Höganäs trademark) are tested for impairment annually and in addition as soon as indications arise that the asset in question has decreased in value. Amortisable intangible assets are amortised from the date when they become available for use.

Estimated useful lives:

• trademarks with a finite useful life of	2 years
• technical expertise	10 years
• customer relationships	10 years
• patents and similar rights	10–20 years
• capitalised development costs	3–10 years

The useful lives are reviewed each year.

(x) Emission allowances
The allocation of carbon emission allowances for the year is recognised in the statement of financial position as an intangible asset and deferred income, respectively, and is measured at cost based on the year's first official quotation. As the emission allowances are used up, they are transferred from deferred income to other current provisions. The short-term provision and the intangible asset are settled when used emission allowances are reported back to the Swedish Energy Agency. Available emission allowances at year-end are tested for impairment and reported at year-end at the lower of acquisition value or market value. Any divested emission allowances are recognised in 'Other operating income'.

(s) Inventories
Inventories are measured at the lower of acquisition value or net realisable value. The acquisition value of inventories is calculated by applying the first in, first out (FIFO) method and includes expenses incurred in acquiring the inventories and transporting them to their current location and condition. For manufactured goods and work in progress, the acquisition value includes a reasonable proportion of indirect costs based on normal capacity.

Net realisable value is the estimated selling price in operating activities, less estimated costs for completion and to achieve a sale.

For in-house manufactured semi-finished and finished goods, the acquisition value consists of direct manufacturing costs and a reasonable proportion of indirect manufacturing costs. Normal capacity utilisation is taken into account in the valuation.

(t) Impairment
The Group's reported assets are assessed on each reporting date to determine if there is any indication of impairment. IAS 36 is applied to impairment of assets other than financial assets that are reported in accordance with IFRS 9; inventories, plan assets used to finance employee benefits and deferred tax assets. For assets subject to the above exception, valuations are tested in accordance with the relevant standard.

(i) Impairment of tangible and intangible assets and interests in joint ventures
If there is an indication of impairment, the asset's recoverable amount is calculated (see below). Recoverable amounts for goodwill, other intangible assets with an indefinite useful life and intangible assets that are not yet ready for use are also calculated annually.

If it is impossible to determine significant independent cash flows of an individual asset and its fair value less costs to sell cannot be used, when testing for impairment, assets are grouped at the lowest level where significant independent cash flows can be identified – a cash-generating unit.

An impairment loss is recognised when the recoverable amount of an asset or a cash-generating unit (group of units) is less than its carrying amount. An impairment loss is recognised as an expense in net income for the year. When impairment has been identified for a cash-generating unit (group of units), the impairment loss is allocated firstly to goodwill. Subsequently, a proportional impairment loss of other assets included in the unit (group of units) is taken.

The recoverable amount is the higher of fair value less costs to sell and value in use. In measuring value in use, cash flows are discounted using a discount rate that reflects the risk-free rate of interest and the risks specific to the asset.

(ii) Reversal of impairment losses
Impairment of assets accounted for under IAS 36 is reversed if there is an indication that the requirement for impairment no longer exists and there has been a change in the assumptions on which the calculation of recoverable amount was based. However, impairment of goodwill is never reversed. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation where applicable, had no impairment loss been recognised.

(iii) Impairment of financial assets
Financial assets, except those classified at fair value through profit or loss, are subject to impairment for expected credit losses. The IFRS 9 expected credit loss model is forward-looking and a loss allowance is recognised when there is an exposure to credit risk, usually on first recognition of an asset or receivable. Expected credit losses reflect an unbiased, probability-weighted outcome that considers multiple scenarios based on reasonable and supportable forecasts.

The simplified model is applied to accounts receivable, contract assets and some other financial receivables. A loss allowance is recognised over the expected remaining lifetime of the receivable or asset. The Group considers that the credit risk on a financial asset has increased significantly if it is more than 90 days overdue. At each reporting date, the Group considers whether financial assets recognised at amortised cost are credit impaired. A financial asset is credit impaired when one or more events that have a negative impact on the financial asset's estimated future cash flows have occurred.

The gross carrying amount of a financial asset is written off when the Group no longer has any reasonable expectation of all or part of the receivable being recovered. The Group makes individual assessments regarding the timing and amount of impairment. However, financial assets that have been written off may still be subject to enforcement measures to comply with the Group's procedures for recovering overdue amounts.

In the statement of financial position, loss allowances for financial assets measured at amortised cost have been deducted from the gross value of the assets.

(u) Payments of capital to owners
(i) Repurchase of treasury shares
Acquisitions of treasury shares are recognised as a deduction from equity. Cash from the disposal of such equity instruments is recognised as an increase in equity. Any transaction costs are recognised directly in equity.

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Note 1 Significant accounting policies, contd.

(ii) Dividends
Dividends are recognised as a liability when the dividend has been adopted by the annual general meeting.

(v) Employee benefits
(i) Defined contribution plans
Defined contribution pension plans are plans where the company's obligation is limited to the contributions the company has agreed to pay. In such cases, the size of the employee's pension depends on the contributions the company pays into the plan or to an insurance company and the return on capital that the contributions provide. Consequently, the employee bears the actuarial risk (that the benefits will be lower than expected) and the investment risk (that the assets invested will be insufficient to provide the expected benefits). The company's obligations regarding contributions to defined contribution plans are recognised as an expense in net income at the rate at which they are earned by employees performing services for the company during a given period.

(ii) Defined benefit plans
Defined benefit plans are post-employment benefit plans other than defined contribution plans. In addition to Sweden, defined benefit plans are also available in the US, Belgium, Germany, Switzerland, India and Italy.

These defined benefit plans are both funded and unfunded. In cases where plans are funded, assets have been separated, mainly in pension funds. These plan assets can only be used to pay benefits in accordance with pension agreements.

The Group's net obligation for defined benefit plans is calculated separately for each plan by estimating the future benefits employees would accrue through their employment in both current and previous periods; these benefits are discounted to a present value.

The discount rate is the rate on the reporting date of an investment grade corporate bond, including a mortgage bond, with a maturity corresponding to the Group's pension obligations. When there is no active market for such corporate bonds, the market rate of government bonds with a corresponding maturity is used instead. The calculation is performed by a qualified actuary using the projected unit credit method. The fair value of any plan asset is also measured at the reporting date. The Group's net liability is the present value of the liability, less the fair value of the plan assets adjusted for any asset restrictions.

All components included in the cost of a defined benefit plan for the period are recognised in operating income.

Revaluation effects consist of actuarial gains and losses, the difference between the actual return on plan assets and the amount included in operating income and any changes in the effects of asset restrictions. Revaluation differences reported in other comprehensive income.

When the calculation results in an asset for the Group, the carrying amount of the asset is limited to the lowest of the surplus in the plan and the asset restriction calculated using the discount rate. The asset restriction consists of the present value of the future economic benefits in the form of reduced future fees or cash repayment. Any minimum funding requirements are taken into account when calculating the present value of future repayments or contributions.

Changes to or reductions of a defined benefit plan are recognised at the earliest of the following times: when the change in the plan or reduction occurs or when the company recognises related restructuring costs and termination benefits. The changes/reductions are recognised directly in net income.

Special payroll tax forms part of the actuarial assumptions and is therefore recognised as part of net liabilities/assets. In the interest of simplification, the part of the special payroll tax calculated for legal entities based on the Pension Obligations Vesting Act is reported as an accrued cost rather than as part of net liabilities/assets.

Tax on returns is recognised on an ongoing basis in income for the period to which the tax relates and is therefore not included in the calculation of liabilities. In the case of funded plans, this tax is charged to the return on plan assets and is recognised in other comprehensive income. In the case of unfunded plans, the tax is charged to net income.

(iii) Remuneration on termination
A cost for remuneration in connection with staff redundancies is only recognised if the company is demonstrably committed, without a realistic possibility of withdrawal, to a formal detailed plan to terminate an employee's employment before the normal time. When remuneration is provided as an incentive to encourage voluntary resignation, a cost is recognised if the offer is likely to be accepted and the number of employees who will accept the offer can be reliably estimated.

(x) Provisions
A provision differs from other liabilities in that there is uncertainty about the date of payment or the size of the amount required to settle the provision. A provision is recognised in the statement of financial position when there is a legal or constructive obligation as a result of a past event and it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

Provisions are recognised at the best estimate of the expenditure required to settle the present obligation at the reporting date. Where the effect of the time value of money is material, provisions are estimated by discounting expected future cash flows using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the liability.

(i) Emission allowances
Emission allowances for carbon dioxide are recognised under current provisions in the statement of financial position. A description of the accounting policies used for emission allowances is provided in point r (x).

(ii) Restoration of land
In accordance with the Group's published environmental principles and applicable legal standards, a provision is recognised for the restoration of landfill sites.

(y) Contingent liabilities
A contingent liability is recognised when a possible obligation arises from past events whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events, or when there is an obligation which is not recognised as a liability or provision because it is not probable that an outflow of resources will be required to settle the obligation.

ACCOUNTING POLICIES – PARENT COMPANY
The parent company's annual financial statements have been prepared in accordance with the Swedish Annual Accounts Act (1995:1554) and the Swedish Financial Reporting Board's recommendation RFR 2 Accounting for Legal Entities. RFR 2 requires the parent company, as a legal entity, to prepare its annual financial statements in compliance with all the IFRS and IFRIC interpretations adopted by the EU, to the extent possible within the framework of

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Note 1 Significant accounting policies, contd.

the Swedish Annual Accounts Act, the Pension Obligations Vesting Act, and taking into account the relationship between tax expense (income) and accounting profit. The recommendation states which exceptions from and additions to IFRS are to be made.

Amended accounting policies

Unless otherwise stated below, the parent company's accounting policies have changed in 2023 in accordance with what is stated above for the Group.

Differences between the Group's and the parent company's accounting policies

Differences between the Group's and the parent company's accounting policies are described below. The accounting policies described below have been applied consistently to all periods presented in the parent company's financial statements.

(i) Classification and presentation

The parent company uses the terms income statement, balance sheet and cash flow statement for the reports that in the Group have the titles income statement, statement of financial position and cash flow statement. The income statement and balance sheet for the parent company are prepared in accordance with the Swedish Annual Accounts Act, while the statement of comprehensive income, the statement of changes in equity and the cash flow statement are based on IAS 1 Presentation of financial statements and IAS 7 Statement of cash flows, respectively. The differences from the Group's reports that apply to the parent company's income statement and balance sheet relate primarily to the recognition of financial income and expenses, fixed assets, equity and the existence of untaxed reserves and provisions as a separate heading in the balance sheet.

(ii) Subsidiaries and joint ventures

Investments in subsidiaries and joint ventures are recognised in the parent company using the cost model. This means that transaction expenses are included in the carrying amount of holdings in subsidiaries and joint ventures. In the consolidated financial statements, transaction expenses are recognised directly in income when they arise.

Contingent considerations are measured based on the likelihood that the consideration will be paid. Any changes in contingent considerations are added to/deducted from the acquisition value. In the consolidated financial statements, contingent considerations are recognised at fair value with changes in value recognised in profit or loss.

(iii) Extended investment

Exchange rate differences on monetary items that form part of the parent company's net investment in a foreign operation are recognised in profit or loss.

(iv) Leased assets

The parent company does not apply IFRS 16, in accordance with the exemption set out in RFR 2. As a lessee, lease payments are recognised as an expense on a straight-line basis over the lease term and thus rights of use and lease liabilities are not recognised in the balance sheet. The parent company has not entered into any lease agreements in its capacity as lessor.

(v) Employee benefits

The parent company uses a different basis for calculating defined benefit plans than stipulated by IAS 19. The parent company complies with the provisions of the Pension Obligations Vesting Act and follows the Swedish Financial Supervisory Authority instructions as this is a prerequisite for tax deduction rights. The most significant differences compared to the rules in IAS 19 are how the discount rate is determined, calculating the defined benefit obligation based on the current salary level without any assumptions of future pay increases, and that all actuarial gains and losses are recognised in the income statement when they arise.

(vi) Group contributions and shareholders' contributions for legal entities

The parent company recognises all Group contributions received and paid in the income statement. These are included in the Appropriations line.

Shareholders' contributions are recognised directly in the recipient's equity and capitalised under shares and participations for the donor, to the extent that no impairment is required.

(vii) Taxes

Untaxed reserves are recognised in the balance sheet in the parent company without any division between equity and deferred tax liabilities, unlike in the Group. Similarly, in the income statement, the parent company does not allocate a portion of appropriations to deferred tax expenses.

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Note 2 Net sales

Group

	Net sales from agreements with customers	
SEK m	**2023**	**2022**
Geographical areas		
Sweden	96	67
Europe (excl. Sweden)	3,429	3,357
America	3,866	3,896
Asia	4,943	4,936
Total	**12,334**	**12,256**

Allocation of Net sales from agreements with customers

Net sales from contracts with customers relates essentially to sales of metal powder.

Contract balances

The Group has no contractual assets or liabilities of material amounts. Accounts receivable are stated in Note 16.

Remaining performance commitments

No information is provided on remaining performance commitments that as at 31 December 2022 or 31 December 2023 have an original expected maturity of no more than one year, which is permitted under IFRS 15.

Note 3 Other operating income

Group

SEK m	**2023**	**2022**
Capital gains on disposal of property, plant and equipment	6	4
Government grants	46	2
Reimbursement of FORA fees	–	1
Divestment of operations	–	396
Disposal of production facilities	–	14
Insurance indemnity	4	5
Other	8	14
Total	**64**	**436**

Note 4 Other operating expenses

Group

SEK m	**2023**	**2022**
Exchange rate losses on operating liabilities/ receivables	8	25
Impairment of intangible assets	88	–
Capital gains on disposal of property, plant and equipment	4	2
Emission allowances, swap	8	–
Other	5	2
Total	**113**	**29**

Note 5 Employees and personnel expenses

Salaries and other benefits

	2023			2022		
	Board, CEO and Management	**Other employees**	**Total**	**Board, CEO and Management**	**Other employees**	**Total**
Salaries and other benefits						
Parent company	–	8	8	–	15	15
of which bonus	–	*–1*	*–1*	–	*8*	*8*
Subsidiaries:	84	1,491	1,575	86	1,445	1,531
of which bonus	*23*	*0*	*23*	*16*	*0*	*16*
Group total	**84**	**1,499**	**1,583**	**86**	**1,460**	**1,546**
Social security contributions						
Parent company	–	7	7	–	8	8
of which pensions	–	*3*	*3*	–	*3*	*3*
Subsidiaries:	29	545	574	26	529	555
of which pensions	*12*	*127*	*139*	*10*	*148*	*158*
Group total	**29**	**552**	**581**	**26**	**537**	**563**
Total personnel expenses	**113**	**2,051**	**2,164**	**112**	**1,997**	**2,109**

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Note 5 Employees and personnel expenses, contd.

Profit-sharing scheme

Höganäs introduced a profit-sharing scheme in 2010 in order to increase employee interest in and commitment to Höganäs' operations. All employees are included in the scheme. Entitlement to profit sharing for the 2023 financial year starts when Höganäs AB and its subsidiaries' operating income exceeds SEK 839 million (1,091). The maximum allocation is reached when income exceeds SEK 1,025 million (1,347), which corresponds to a profit share of SEK 28.0 million (38.5) at 100 percent outcome. SEK 25.7 (35.5) million was therefore reserved for 2023.

Severance pay

Upon termination by the company, 15 executives are entitled to a maximum of 24 months' salary in severance pay, including notice period and pension benefits. No severance pay is due if termination of employment is initiated by an employee.

Pensions

Expenses for defined contribution plans in the Group during the year were SEK 120 million (121), of which SEK 3 million (3) in the parent company. The remaining part is defined benefit plans in accordance with Note 22.

Average number of employees

	2023		2022	
	No. of	of which male, %	No. of	of which male, %
Parent company in Sweden	*1*	*100*	*1*	*100*
Subsidiaries				
Sweden	762	79	826	79
Belgium	173	93	175	92
Brazil	130	81	133	83
France	9	44	9	44
India	82	91	81	93
Italy	6	67	5	60
Japan	38	68	41	71
China	128	71	125	74
Korea	30	73	28	68
Russia	0	0	3	33
Switzerland	29	93	27	96
Spain	1	100	1	100
UK	54	89	57	84
Taiwan	8	38	9	44
Germany	443	86	458	87
United States	356	88	381	88
Subsidiaries total	**2,249**	**83**	**2,359**	**83**
Group total	**2,250**	**83**	**2,360**	**83**

Gender distribution in company management

Group

	31 Dec. 2023	31 Dec. 2022
	Women, %	Women, %
Board of Directors	23	26
Other senior executives	18	18

Parent company

	31 Dec. 2023	31 Dec. 2022
	Women, %	Women, %
Board of Directors	–	–
Other senior executives	–	–

Note 6 Auditors' fees and remuneration

	Group		Parent company	
SEK m	2023	2022	2023	2022
PwC				
Audit services*	8.0	–	1.1	–
Tax advisory services	0.2	–	–	–
Other services	0.0	–	0.0	–
Total	**8.2**	**–**	**1.1**	**–**
KPMG				
Audit services*	0.3	8.6	–	0.9
Tax advisory services	0.2	0.2	0.0	–
Other services	0.2	0.4	0.1	0.2
Total	**0.7**	**9.2**	**0.1**	**0.9**
Other auditors	0.9	0.1	–	–

* Audit services refer to the audit of the annual accounts, accounting records and administration of the Board of Directors and the CEO, as well as other tasks that the company's auditor is responsible for performing.

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Note 7 Operating expenses by cost item

Group

SEK m	Note	2023	2022
Personnel expenses	5		
Salaries and other benefits		1,583	1,546
Social security contributions		439	402
Pension costs		142	161
Total		**2,164**	**2,109**
Depreciation/amortisation and cost of goods sold included in the income statement			
Included in cost of goods sold:			
Amortisation of intangible assets	10	35	55
Depreciation of property, plant and equipment	11, 12	440	418
Impairment of property, plant and equipment	11	42	–
Other expenses for goods production/consumption		9,599	9,503
Included in selling expenses:			
Amortisation of intangible assets	10	135	181
Depreciation of property, plant and equipment	11, 12	30	28
Impairment of property, plant and equipment	11	–	2
Included in administrative expenses:			
Amortisation of intangible assets	10	7	2
Depreciation of property, plant and equipment	11, 12	16	20
Impairment of property, plant and equipment	11, 12	–	15
Included in research and development expenses:			
Amortisation of intangible assets	10	1	3
Depreciation of property, plant and equipment	11, 12	19	23
Impairment of property, plant and equipment	11, 12	1	6
Impairment of intangible assets	10	6	–

Other operating expenses

Other operating expenses include impairment of intangible assets of SEK 88 million. See Note 4.

Note 8 Net financial income/expense

Group

SEK m	2023	2022
Financial income		
Interest income	22	16
Interest income attributable to derivative instruments and external investments	6	–
Interest income attributable to interest rate swaps	71	–
Net exchange differences	14	–
Total	**113**	**16**
Financial expenses		
Interest expenses on loans measured at amortised cost	–220	–113
Interest expenses attributable to interest rate swaps	–	–7
Interest expenses attributable to leases	–17	–12
Net exchange differences	–	–61
Other financial expenses	–2	–3
Total	**–239**	**–196**
Net financial income/expense	**–126**	**–180**

Parent company

SEK m	2023	2022
Interest and similar income		
Interest income attributable to interest rate swaps	71	–
Interest income, other	0	0
Net exchange differences	40	–
Total	**111**	**0**
Interest and similar expenses		
Interest expenses, Group companies	–119	–46
Interest expenses attributable to interest rate swaps	–	–7
Interest expenses, other	–208	–96
Net exchange differences	–	–350
Total	**–327**	**–499**
Net financial income/expense	**–216**	**–499**

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Note 9 Taxes

Tax items recognised in income statements

Group

SEK m	2023	2022
Current tax expense (–) / tax income (+)		
Tax expense for the period	–142	–195
Adjustment of tax attributable to prior years	0	–1
Total	**–142**	**–196**
Deferred tax expense (–) / tax income (+)		
Deferred tax on temporary differences	–37	–17
Deferred tax attributable to changes in tax rates	0	–15
Deferred tax attributable to capitalised tax loss carry-forwards	23	41
Deferred tax expense attributable to utilisation of previously capitalised tax loss carry-forwards	–45	–15
Remeasurement of deferred tax attributable to prior years	–3	–1
Deferred tax on remeasurement of deferred tax assets	–9	41
Total	**–71**	**34**
Recognised tax expense	**–213**	**–162**

Parent company

SEK m	2023	2022
Current tax expense (–) / tax income (+)		
Tax expense for the period	–19	–
Total	**–19**	**–**
Deferred tax expense (–) / tax income (+)		
Deferred tax on temporary differences	3	0
Deferred tax income in tax loss carry-forwards capitalised during year	–35	35
Total	**–32**	**35**
Recognised tax expense	**–51**	**35**

Reconciliation of effective tax

Group

SEK m		2023		2022
Earnings before tax		590		941
Tax according to parent company's enacted tax rate	20.6%	–122	20.6%	–194
Effect of different tax rates for foreign subsidiaries	8.5%	–50	3.9%	–37
Non-deductible expenses	4.9%	–29	3.1%	–29
Non-taxable income	0.0%	0	–8.7%	82
Unrecognised tax losses incurred during the year	1.2%	–7	1.5%	–14
Remeasurement of tax losses carry-forwards and temporary differences attributable to prior years	–0.7%	4	–0.3%	3
Tax attributable to prior years	0.3%	–2	0.2%	–2
Effect of changed tax rates	0.0%	0	1.6%	–15
Remeasurement of deferred tax	1.5%	–9	–4.3%	41
Other	–0.3%	2	–0.3%	3
Recognised effective tax	**36.0%**	**–213**	**17.3%**	**–162**

Parent company

SEK m		2023		2022
Earnings before tax		64		–322
Tax according to parent company's enacted tax rate	20.6%	–13	20.6%	66
Non-deductible expenses	59.4%	–38	–9.6%	–31
Recognised effective tax	**80.0%**	**–51**	**11.0%**	**35**

Tax items recognised in other comprehensive income

Group

SEK m	2023	2022
Deferred tax attributable to hedging of currency risk in foreign operations	–8	72
Deferred tax attributable to cash flow hedges	77	7
Current tax attributable to cash flow hedges	–46	–
Deferred tax attributable to foreign exchange gains and losses	14	–35
Current tax attributable to foreign exchange gains and losses	–9	35
Deferred tax attributable to revaluation of defined benefit pension plans	10	–62
Total	**38**	**17**

Parent company

SEK m	2023	2022
Deferred tax attributable to hedging	19	–37
Total	**19**	**–37**

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Note 9 Taxes, contd.

Deferred tax assets and liabilities recognised in the statement of financial position

Group

	Deferred tax assets		Deferred tax liabilities		Net	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Intangible assets	125	144	276	323	–151	–179
Property, plant and equipment	1	1	338	353	–337	–352
Rights of use	–	–	90	80	–90	–80
Inventories	60	89	–	–	60	89
Accounts receivables	2	4	–	–	2	4
Provision for pensions	65	55	–	–	65	55
Interest-bearing liabilities	–	–	78	98	–78	–98
Lease liabilities	96	86	–	–	96	86
Financial instruments	21	22	30	70	–9	–48
Tax allocation reserve	–	–	18	–	–18	–
Other	36	49	–	–	36	49
Tax loss carry-forwards	132	159	–	–	132	159
Tax assets/liabilities	538	609	830	924	–292	–315
Off-setting	–194	–195	–194	–195	–	–
Tax assets/liabilities, net	**344**	**414**	**636**	**729**	**–292**	**–315**

Parent company

	Deferred tax assets		Deferred tax liabilities		Net	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Provision for pensions	7	7	–	–	7	7
Financial instruments	–	–	14	33	–14	–33
Other	3	–	–	–	3	–
Tax loss carry-forwards	–	35	–	–	–	35
Tax assets/liabilities	10	42	14	33	–4	9
Off-setting	–10	–33	–10	–33	–	–
Tax assets/liabilities, net	**–**	**9**	**4**	**–**	**–4**	**9**

Unrecognised deferred tax assets

Deferred tax assets not recognised in the income statement and the statement of financial position relating to:

	Group		Parent company	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Deductible temporary differences	–	–	–	–
Tax losses carry-forwards	99	95	–	–
Total	**99**	**95**	**–**	**–**

Unrecognised deferred tax assets mainly relate to loss carry-forwards in Germany, Switzerland and Brazil, as well as state tax in the US, which it is unlikely that the Group will be able to utilise for off-setting against future taxable profits.

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Note 9 Taxes, contd.

Change in deferred tax in temporary differences and loss carry-forwards

Group

SEK m	Balance sheet as at 1 Jan. 2022	Recognised in the income statement	Recognised in other compre-hensive income	Divestment of operations	Translation difference	Balance sheet as at 31 Dec. 2022
Intangible assets	–221	35	–	–	7	–179
Property, plant and equipment	–317	–12	–	–	–23	–352
Rights of use	–78	–2	–	–	0	–80
Inventories	74	12	–	–	3	89
Accounts receivable	4	0	–	–	0	4
Provision for pensions	105	6	–62	–	6	55
Interest-bearing liabilities	–69	–66	37	–	–	–98
Lease liabilities	85	1	–	–	0	86
Financial instruments	–56	1	7	–	–	–48
Tax allocation reserves	–8	8	–	–	–	–
Other	44	0	–	–	5	49
Tax loss carry-forwards	99	51	–	–4	13	159
Total	**–338**	**34**	**–18**	**–4**	**11**	**–315**

SEK m	Balance sheet as at 1 Jan. 2023	Recognised in the income statement	Recognised in other compre-hensive income	Divestments of operations	Translation difference	Balance sheet as at 31 Dec. 2023
Intangible assets	–179	28	–	–	0	–151
Property, plant and equipment	–352	10	–	–	5	–337
Rights of use	–80	–10	–	–	0	–90
Inventories	89	–27	–	–	–2	60
Accounts receivable	4	–2	–	–	0	2
Provision for pensions	55	1	10	–	–1	65
Interest-bearing liabilities	–98	14	6	–	–	–78
Lease liabilities	86	10	–	–	0	96
Financial instruments	–48	–38	77	–	–	–9
Tax allocation reserves	–	–18	–	–	–	–18
Other	49	–12	–	–	–1	36
Tax loss carry-forwards	159	–27	–	–	0	132
Total	**–315**	**–71**	**93**	**–**	**1**	**–292**

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Note 9 Taxes, contd.

Parent company

SEK m	Balance sheet as at 1 Jan. 2022	Recognised in the income statement	Recognised in other comprehensive income	Balance sheet as at 31 Dec. 2022
Provision for pensions	7	0	–	7
Financial instruments	4	–	–37	–33
Tax loss carry-forwards	–	35	–	35
Total	**11**	**35**	**–37**	**9**

SEK m	Balance sheet as at 1 Jan. 2023	Recognised in the income statement	Recognised in other comprehensive income	Balance sheet as at 31 Dec. 2023
Provision for pensions	7	0	–	7
Financial instruments	–33	–	19	–14
Other	–	3	–	3
Tax loss carry-forwards	35	–35	–	–
Total	**9**	**–32**	**19**	**–4**

Tax rules in accordance with BEPS Pillar II

The Group is subject to the OECD Model Rules for BEPS Pillar II. Legislation on Pillar II has been adopted in Sweden, where Höganäs Holding AB has its head office, and will enter into force on 1 January 2024. As the Pillar II legislation had not come into force on the reporting date, the Group has no related current tax exposure. The Group applies the exemption to report and disclose deferred tax assets and liabilities related to income taxes from Pillar II, as set out in the amendments to IAS 12 issued in May 2023.

According to the law, the Group is obliged to pay an additional tax on the difference between the effective tax rate calculated according to the GloBE rules for each jurisdiction and the minimum tax rate of 15 percent. All companies within the Group have an effective tax rate that is higher than 15 percent.

Due to the complexity of applying the legislation and calculating GloBE revenue, the quantitative impact of the adopted legislation or adopted in practice cannot yet be estimated with reasonable certainty. Therefore, there may still be tax consequences with regard to Pillar II, even for those companies in the Group with a reported effective tax rate higher than 15 percent. The company is currently working with tax specialists to provide assistance with applying the legislation.

Note 10 Intangible assets

Group

SEK m	Customer relationships	Technical know-how	Trademark	Goodwill	Capitalised development costs	Patents and similar assets	Advances, intangible assets	Total
Acquisition value								
Opening balance, 1 Jan. 2022	1,787	472	1,119	6,216	75	374	24	10,067
Acquisitions	–	–	–	–	–	308	44	352
Divestment of operations	–	–	–	–	–4	–39	–11	–54
Disposals	–	–	–	–	–11	–304	–	–315
Reclassifications	–	–	–	–	–	1	–1	–
Translation differences for the year	29	1	2	56	–	13	–	101
Closing balance, 31 Dec. 2022	**1,816**	**473**	**1,121**	**6,272**	**60**	**353**	**56**	**10,151**
Opening balance, 1 Jan. 2023	1,816	473	1,121	6,272	60	353	56	10,151
Acquisitions	–	–	–	–	–	353	153	506
Divestment of operations	–	–	–	–	–	–	–	–
Disposals	–	–	–	–	–	–381	–15	–396
Reclassifications	–	–	–	–	0	11	–8	3
Translation differences for the year	0	2	0	–2	–	–2	–7	–9
Closing balance, 31 Dec. 2023	**1,816**	**475**	**1,121**	**6,270**	**60**	**334**	**179**	**10,255**

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Note 10 Intangible assets, contd.

SEK m	Customer relationships	Technical know-how	Trademark	Goodwill	Capitalised development costs	Patents and similar assets	Advances, intangible assets	Total
Accumulated amortisation								
Opening balance, 1 Jan. 2022	–1,346	–386	–11	–	–63	–318	–	–2,124
Amortisation for the year	–180	–47	–	–	–3	–11	–	–241
Divestment of operations	–	–	–	–	3	36	–	39
Disposals	–	–	–	–	9	–	–	9
Translation differences for the year	–13	–1	–1	–	–	–11	–	–26
Closing balance, 31 Dec. 2022	**–1,539**	**–434**	**–12**	**–**	**–54**	**–304**	**–**	**–2,343**
Opening balance, 1 Jan. 2023	–1,539	–434	–12	–	–54	–304	–	–2,343
Amortisation for the year	–134	–33	–	–	–1	–10	–	–178
Divestment of operations	–	–	–	–	–	–	–	–
Disposals	–	–	–	–	–	23	–	23
Translation differences for the year	0	–1	0	–	–	1	–	0
Closing balance, 31 Dec. 2023	**–1,673**	**–468**	**–12**	**–**	**–55**	**–290**	**–**	**–2,498**
Accumulated impairment losses								
Opening balance, 1 Jan. 2022	–	–	–	–	–	–	–	–
Impairment loss for the year	–	–	–	–	–	–	–	–
Disposals	–	–	–	–	–	–	–	–
Translation differences for the year	–	–	–	–	–	–	–	–
Closing balance, 31 Dec. 2022	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Opening balance, 1 Jan. 2023	–	–	–	–	–	–	–	–
Impairment loss for the year	–7	–	–9	–72	0	–	–6	–94
Disposals	–	–	–	–	–	–	–	–
Translation differences for the year	0	–	0	0	–	–	–	–
Closing balance, 31 Dec. 2023	**–7**	**–**	**–9**	**–72**	**0**	**–**	**–6**	**–94**
Carrying amounts								
As of 1 Jan. 2022	441	86	1,108	6,216	12	56	24	7,943
As of 31 Dec. 2022	277	39	1,109	6,272	6	49	56	7,808
As of 1 Jan. 2023	277	39	1,109	6,272	6	49	56	7,808
As of 31 Dec. 2023	136	7	1,100	6,198	5	44	173	7,663

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Note 10 Intangible assets, contd.

Impairment testing of intangible assets

Höganäs Holding AB assesses on an ongoing basis whether there is an indication of impairment for intangible assets. If such an indication exists, testing is carried out to ensure that the carrying amount of the intangible assets does not exceed the recoverable amount. In addition, goodwill and trademarks that are not depreciated are tested annually to ensure that the recoverable amount exceeds the carrying amounts and that there is therefore no requirement for impairment.

Acquired trademarks that are deemed to have an indefinite useful life are essentially derived from the acquisition of the Höganäs Group. The useful life is considered to be indefinite as it concerns well-established trademarks in its market, which the Group intends to retain and further develop. The trademarks are considered to be of essential economic importance as they form an integral part of the offering to the market by signalling quality and innovation in the products and hence can influence pricing and competitiveness. They are therefore considered to have an indefinite useful life because they are inherently inextricably linked to business operations and will be so for as long as the business operations continue.

The cash-generating unit for which impairment is tested has been identified as the operational Höganäs Group, in which all of the Group's goodwill and trademarks are reported (see table on pages 74–75). In the 2018 financial year, the Höganäs Group acquired all shares and votes in H.C. Starck Surface Technology and Ceramic Powders GmbH, together with Alvier AG PM-Technology. The purpose of the acquisitions was strategic where synergies are deemed to arise in both the original Höganäs Group and in the acquired companies. The integration work was completed in 2021 and the operations are now fully integrated into the existing Höganäs Group. Consequently, the Höganäs Group continues to constitute the cash-generating unit for which impairment testing is carried out.

Impairment is also tested in cases where there are indications that assets may have decreased in value. As a result of the negative earnings trends for Alvier AG PM-Technology in recent years, impairment testing was carried out separately for this unit based on a strategic plan drawn up for the company. The test showed a total impairment of SEK 81 million.

Considering that an assessment has been made that cash flows attributable to trademarks cannot be separated from other cash flows within the cash-generating unit, impairment testing is carried out for both goodwill and trademarks together by calculating the recoverable amount for the cash-generating unit.

The impairment test for the cash-generating unit is based on the calculation of the value in use. This value is based on cash flow calculations over a forecast period of five years (ten), adjusted if necessary for production capacity in existing plants, which is based on the most recently approved business plan together with the forecasts produced by management. The subsequently calculated cash flows in the residual period have been based on an annual growth rate of 2.0 percent (2.0), which is deemed to correspond to the long-term growth rate in the unit's markets. The estimated cash flows have been calculated at present value with a discount rate of 12.4 percent (11.3) before tax. The key assumptions in the five-year projections and the methods used to estimate values are as follows:

Key variables	Method for estimating values
Market share and growth	Demand for the unit's products has historically followed economic trends. Expected market growth is based on an assessment of economic trends taking into account the expected long-term growth. Current market share has been assumed for future periods. The forecast is consistent with previous experience and external sources of information.
Raw material prices	Raw material prices have been forecast based on the average price from 2023. Price changes are assumed to be possible to pass on directly to the customer. Exchange rate fluctuations have been taken into account. The forecast is consistent with previous experience and external sources of information.
Electricity prices	Electricity price forecasts are based on the current reference price and on quoted forward rates. Existing electricity price hedges have been taken into account. The forecast is consistent with external information sources.
Personnel expenses	The forecast for personnel costs is based on expected inflation, a certain real pay rise (historical average) and planned streamlining of the company's production (in accordance with the agreed budget and strategic plan). The forecast is consistent with previous experience and external sources of information.
Discount rate	The discount rate is calculated using a weighted average cost of capital for the industry in which the Group operates and reflects current market assessments of the fair value of money and the risks that relate specifically to the asset for which future cash flows have not been adjusted.

When testing impairment for Alvier AG PM-Technology, the recoverable amount was found to be below the carrying amount, hence goodwill attributable to the acquisition was written down by SEK 72 million and the trademark by SEK 9 million. These assets are now reported at SEK 0 million.

For the Höganäs Group in general, the recoverable amount exceeds the carrying amount by SEK 1,074 million (1,062). This margin means that reasonable possible changes in key assumptions could mean that the recoverable amount would be lower than its carrying amount. The values used for the value in use calculations and the revised values that result in the recoverable amount being equal to the carrying amount are as follows:

Variable	Assumed value 2023	Assumed value 2022
Annual average gross margin	22.1 percent	27.0 percent
Discount rate	9.4 percent	8.5 percent

State and EU-funded research and development projects

In 2023, the Group recognised research and development grants of SEK 0 million (2) as income.

In 2023, nine new government-funded projects were launched. Three projects in the area of Sustainability, three in Process Development, two in Product Development and one project in Electrification. Projects initiated previously that continued in 2023 are five projects in the area of Sustainability, three in Process Development and one project in Electrification.

The above projects were initiated by Horizon 2020, Horizon Europe, the Swedish Energy Agency, Vinnova, Metallic Materials, RISE, the Swedish Research Institute, Chalmers University and University West, KK Foundation.

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Note 11 Property, plant and equipment

Group

31 Dec. 2022, SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Construction in progress	Total
Property, plant and equipment owned as described below	1,001	1,906	282	393	3,582
Right-of-use assets in accordance with Note 12	212	12	74	–	298
Carrying amounts	**1,213**	**1,918**	**356**	**393**	**3,880**

Group

31 Dec. 2023, SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Construction in progress	Total
Property, plant and equipment owned as described below	981	1,849	264	451	3,545
Right-of-use assets in accordance with Note 12	210	11	116	0	337
Carrying amounts	**1,191**	**1,860**	**380**	**451**	**3,882**

Owned property, plant and equipment

Group

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Construction in progress	Total
Acquisition value					
Opening balance, 1 Jan. 2022	2,048	6,877	731	309	9,965
Acquisitions	3	79	5	366	453
Divestment of operations	–	–39	–5	–2	–46
Disposals	–132	–399	–60	–1	–592
Reclassifications	14	190	85	–289	–
Translation differences for the year	145	406	66	22	639
Closing balance, 31 Dec. 2022	**2,078**	**7,114**	**822**	**405**	**10,419**
Opening balance, 1 Jan. 2023	2,078	7,114	822	405	10,419
Acquisitions	1	77	9	427	514
Divestment of operations	–	–	–	–	–
Disposals	–4	–85	–19	–12	–120
Reclassifications	55	234	33	–325	–3
Translation differences for the year	–41	–98	–18	–4	–161
Closing balance, 31 Dec. 2023	**2,089**	**7,242**	**827**	**491**	**10,649**

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Note 11 Property, plant and equipment, contd.

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Construction in progress	Total
Accumulated depreciation					
Opening balance, 1 Jan. 2022	–1,017	–4,889	–491	–	–6,397
Depreciation for the year	–60	–304	–52	–	–416
Divestment of operations	–	33	4	–	37
Disposals	62	278	41	–	381
Translation differences for the year	–62	–283	–38	–	–383
Closing balance, 31 Dec. 2022	**–1,077**	**–5,165**	**–536**	**–**	**–6,778**
Opening balance, 1 Jan. 2023	–1,077	–5,165	–536	–	–6,778
Depreciation for the year	–57	–309	–56	–	–422
Disposals	4	57	18	–	79
Reclassifications	–	–3	3	–	–
Translation differences for the year	22	70	12	–	104
Closing balance, 31 Dec. 2023	**–1,108**	**–5,350**	**–559**	**–**	**–7,017**

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Construction in progress	Total
Accumulated impairment losses					
Opening balance, 1 Jan. 2022	–60	–132	–12	–11	–215
Impairment loss for the year	–2	–	–7	–1	–10
Disposals	69	102	16	1	188
Translation differences for the year	–7	–13	–1	–1	–22
Closing balance, 31 Dec. 2022	**–**	**–43**	**–4**	**–12**	**–59**
Opening balance, 1 Jan. 2023	–	–43	–4	–12	–59
Impairment loss for the year	–	–2	0	–41	–43
Disposals	–	–	–	12	12
Translation differences for the year	–	2	–	1	3
Closing balance, 31 Dec. 2023	**–**	**–43**	**–4**	**–40**	**–87**
Carrying amounts					
As of 1 Jan. 2022	971	1,856	228	298	3,353
As of 31 Dec. 2022	1,001	1,906	282	393	3,582
As of 1 Jan. 2023	1,001	1,906	282	393	3,582
As of 31 Dec. 2023	981	1,849	264	451	3,545

Information on government grants in the Group/parent company

In 2005, Höganäs AB entered into an agreement to supply heat to Höganäs Fjärrvärme AB for the period 2006–2025. An initial investment was required on Höganäs AB's part to be able to connect to Höganäs Fjärrvärme's grid. The parent company received a grant of SEK 25 million from Höganäs Municipality to cover this investment.

In 2008 and 2010, supplementary agreements were signed to expand the supply capacity of waste heat. In order to complete the expansion, Höganäs AB made an expansion investment that Höganäs Fjärrvärme AB financed in part by paying a connection fee of SEK 14 million. The investment was completed in 2009. In connection with the intra-group transfer of assets in 2010, both the part-financed plants and the associated grants were transferred from Höganäs AB to Höganäs Sweden AB. An additional investment of SEK 1 million was made in 2018 and SEK 3 million in 2020, which Höganäs Energi AB financed in line with the supplementary agreement.

In 2020, a grant of SEK 2 million was received from the Swedish Energy Agency and SEK 1 million from the Swedish Environmental Protection Agency for investment in an upgraded belt furnace with more efficient annealing of atomised iron powder.

The recognised deferred income at year-end relating to government grants received corresponds to 23 percent of the acquisition value of the assets that the grant is intended to cover. In line with the contractual term or the depreciation period, the deferred amount is recognised as income and reported in Other operating income.

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Note 12 Leasing

Lessee

Höganäs leases several types of assets, consisting mainly of office, production and warehouse premises, as well as trucks and cars. At year-end, the lease portfolio contained approximately 360 lease agreements with an average term of six years. In terms of numbers, around three quarters are leases for trucks and cars, with an average term of four years. However, in terms of amount, around two thirds relate to office, production and warehouse premises with an average term of 20 years. Only a few agreements were terminated early in 2023.

Leases contain no restrictions other than collateral in the leased assets. The variable fees or any residual value guarantees do not add up to any significant amounts. The management of extension options is described in Note 1, section (q). To the extent that the agreements are index-based, this is taken into account in right-of-use assets and lease liabilities as of the end of December 2023. As of the reporting date, there were no significant lease agreements that had been signed, but not yet started. There are no sub-leases or sale and leaseback transactions of right-of-use assets.

In addition to the aforementioned agreements, the Group also leases a number of low value assets, such as smaller IT and office equipment. A number of leases also have a shorter term than 12 months. The Group has chosen not to recognise right-of-use assets and lease liabilities for these leases. The Group's future obligations as at the end of December 2023 relating to short-term leases are at the same level as the previous year.

The Group's property, plant and equipment comprises both owned and leased assets (right-of-use assets). A breakdown of the owned assets can be found in Note 11 Property, plant and equipment. Important estimates and assessments related to leasing, such as determination of the lease term and discount rate, are described in Note 30.

Right-of-use assets

Group

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Total
Acquisition value				
Opening balance, 1 Jan. 2022	301	26	146	473
Acquired right-of-use assets in the year	29	–	22	51
Amended right-of-use assets*	20	1	–	21
Early termination from agreements	–18	–6	–18	–42
Divestment of operations	–4	–	–1	–5
Translation differences for the year	23	3	15	41
Closing balance, 31 Dec. 2022	**351**	**24**	**164**	**539**
Opening balance, 1 Jan. 2023	351	24	164	539
Acquired right-of-use assets in the year	32	4	78	114
Amended right-of-use assets*	17	–	10	27
Early termination from agreements	–21	–6	–17	–44
Divestment of operations	–	–	–	–
Translation differences for the year	–9	0	–5	–14
Closing balance, 31 Dec. 2023	**370**	**22**	**230**	**622**
Accumulated depreciation				
Opening balance, 1 Jan. 2022	–92	–11	–65	–168
Depreciation for the year	–33	–5	–35	–73
Early termination from agreements	5	5	17	27
Divestment of operations	3	–	–	3
Translation differences for the year	–9	–1	–7	–17
Closing balance, 31 Dec. 2022	**–126**	**–12**	**–90**	**–228**
Opening balance, 1 Jan. 2023	–126	–12	–90	–228
Depreciation for the year	–36	–5	–42	–83
Early termination from agreements	12	5	15	32
Divestment of operations	–	–	–	–
Translation differences for the year	3	1	3	7
Closing balance, 31 Dec. 2023	**–147**	**–11**	**–114**	**–272**

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Note 12 Leasing, contd.

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Total
Accumulated impairment losses				
Opening balance, 1 Jan. 2022	–	–	–	–
Impairment loss for the year	–13	–	–	–13
Closing balance, 31 Dec. 2022	**–13**	**–**	**–**	**–13**
Opening balance, 1 Jan. 2023	–13	–	–	–13
Impairment loss for the year	–	–	–	–
Closing balance, 31 Dec. 2023	**–13**	**–**	**–**	**–13**

SEK m	Buildings and land	Machinery and other technical equipment	Equipment, tools, fixtures and fittings	Total
Carrying amounts				
As of 1 Jan. 2022	209	15	81	305
As of 31 Dec. 2022	212	12	74	298
As of 1 Jan. 2023	212	12	74	298
As of 31 Dec. 2023	210	11	116	337

* The amount for amended right-of-use assets includes the acquisition value of additional amounts when reassessing lease liabilities due to changes in payments as a result of changes in the lease term.

Lease liabilities

Group

SEK m	Note	31 Dec. 2023	31 Dec. 2022
Non-current lease liabilities	20	283	258
Current lease liabilities	20	83	77
Total lease liabilities		**366**	**335**
Maturity structure of lease liabilities			
Within one year:		92	84
One to five years:		70	65
Two to five years		142	123
Five to ten years:		110	100
More than ten years:		10	14
Total payments		**424**	**386**
Effect of discounting		–58	–51
Total lease liabilities		**366**	**335**

Expenses reported in the income statement

Group

SEK m	2023	2022
Depreciation of right-of-use-assets	83	73
Impairment of right-of-use-assets	–	13
Interest expenses on lease liabilities	17	12
Expenses attributable to variable lease payments not included in the measurement of lease liabilities	2	3
Expenses attributable to short-term leases	12	9
Costs attributable to low-value leases	4	4
Total	**118**	**114**

Amounts recognised in the consolidated statement of cash flows

Group

SEK m	2023	2022
Total cash outflows attributable to leases	116	116

The above cash outflows include both amounts for leases reported as lease liabilities and amounts paid for variable lease payments and short-term leases.

Parent company

The parent company's operating lease payments in 2023 amounted to SEK 0 million (0). Future non-cancellable lease payments amounted to SEK 0 million (0).

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Note 13 Group companies

Holdings in subsidiaries

Parent company	Registered office, country	Participating interest, % 31 Dec. 2023	31 Dec. 2022
Höganäs AB, 556005–0121	Höganäs, Sweden	100.0	100.0
Höganäs Hamnbyggnads AB, 556000–8301	Höganäs, Sweden	94.0	94.0
Alvier Mechatronics AB, 556324–0760	Höganäs, Sweden	100.0	100.0
ZeBeyond Ltd	Leamington, UK	50.0	50.0
Höganäs Brazil Ltda	Mogi das Cruzes, Brazil	0.2	0.2
Höganäs Saltglaserat AB, 556054–5922	Höganäs, Sweden	100.0	100.0
Höganäs Sweden AB, 556204–9691	Höganäs, Sweden	100.0	100.0
Alvier AG PM Technology	Buchs SG, Switzerland	100.0	100.0
Alvier Mechatronics GmbH	Goslar, Germany	100.0	100.0
Höganäs Germany GmbH	Goslar, Germany	100.0	100.0
Höganäs Belgium S.A.	Ath, Belgium	100.0	100.0
Höganäs Brazil Ltda	Mogi das Cruzes, Brazil	99.8	99.8
HRC Metalizações, Ltda	Piracicaba, Brazil	50.0	50.0
Höganäs (China) Co., Ltd	Shanghai, China	100.0	100.0
Höganäs East Europe LLC	St. Petersburg, Russia	100.0	100.0
Höganäs France SAS	Limas, France	100.0	100.0
Höganäs (United Kingdom) Ltd	Kent, UK	100.0	100.0
Abril Industrial Waxes Ltd.	Kent, UK	100.0	100.0
Höganäs Iberica S.A.	Madrid, Spain	100.0	100.0
Höganäs India Pvt Ltd.	Pune, India	100.0	100.0
Höganäs Italia S.r.l.	Rapallo, Italy	100.0	100.0
Höganäs Japan KK	Tokyo, Japan	100.0	100.0
Höganäs Korea Ltd.	Busan, Korea	100.0	100.0
Höganäs Taiwan Ltd.	Taipei, Taiwan	100.0	100.0
North American Höganäs Holdings Inc.	Hollsopple, US	100.0	100.0
NAH Finance Holding AB, 556662–4572	Höganäs, Sweden	100.0	100.0
Höganäs Environment Solutions, LLC	Cary, US	100.0	100.0
NAH Financial Services Inc.	Wilmington, US	100.0	100.0
North American Höganäs High Alloys LLC	Hollsopple, US	100.0	100.0
North American Höganäs Co.	Hollsopple, US	100.0	100.0

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Note 13 Group companies, contd.

Parent company

SEK m	31 Dec. 2023	31 Dec. 2022
Acquisition value		
Opening balance	12,054	12,054
Closing balance, 31 December	**12,054**	**12,054**
Accumulated impairment losses		
Opening balance	–225	–225
Closing balance, 31 December	**–225**	**–225**
Carrying amount	**11,829**	**11,829**

Breakdown of parent company's direct holdings of shares in subsidiaries

Parent company

	Number of shares	Share of equity, %	Carrying amount	
SEK m			31 Dec. 2023	31 Dec. 2022
Höganäs AB (publ)	35,098,932	100	11,829	11,829
Total			**11,829**	**11,829**

Note 14 Non-current receivables

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Receivables from joint ventures	6	6
Plan assets, pensions	7	4
Deposit	27	27
Derivatives held for hedging	69	156
Recovered VAT receivable abroad	6	13
Prepaid expenses for relocation of production facility in China	9	–
Other	7	10
Total	**131**	**216**

Note 15 Inventories

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Raw materials and consumables	1,023	1,236
Work-in-progress	738	998
Finished goods and goods for resale	1,662	1,816
Total	**3,423**	**4,050**

The cost of goods sold includes impairment of inventories of SEK –51 million (–106) and a reversal of previous impairment of SEK 45 million (67). Overall, a net effect attributable to an obsolescence adjustment of SEK –6 million (–39). Impairments and reversals are based on an individual assessment of the quality and age of the goods.

Note 16 Accounts receivable/credit risk

Credit risk

Credit risk can be divided into commercial and financial counterparty risk. Commercial counterparty risk is the risk that one of the Group's customers becomes insolvent and that sales forecasts or hedged flows cannot be realised.

To some extent, Höganäs' credit risk relating to customers is limited through sales taking place in a large number of countries to a large number of customers, thus achieving risk diversification. Höganäs has credit insurance of approximately USD 12 million that is intended to reduce the credit risk from customers in the US. Höganäs also uses export letters of credit when selling in certain markets.

At year-end, the single largest credit exposure amounted to SEK 134 million (93). The Group's credit policy stipulates that credit checks precede all sales to new customers. Bad debt amounted to SEK 2 million (2) in 2023. This represents 0.02 percent (0.02) of consolidated Net sales.

Financial counterparty risk is the risk of a counterparty that Höganäs has entered a contract with becoming insolvent and that an investment and/or unrealised gain cannot be repaid.

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Note 16 Accounts receivable/credit risk, contd.

Age analysis, accounts receivable past due but not impaired

Group

31 Dec. 2023, SEK m	Gross	Provisions to loss reserve	Carrying amount, not impaired	Collateral
Not past due	1,370	–4	1,366	110
Past due 0–30 days	153	–	153	11
Past due 31–90 days	31	–1	30	–
Past due 91–180 days	0	0	0	–
Past due 181–360 days	5	–5	0	–
Past due >360 days	2	–2	0	–
Total	**1,561**	**–12**	**1,549**	**121**

31 Dec. 2022, SEK m	Gross	Provisions to loss reserve	Carrying amount, not impaired	Collateral
Not past due	1,425	–	1,425	59
Past due 0–30 days	239	–14	225	63
Past due 31–90 days	16	0	16	3
Past due 91–180 days	4	–2	2	–
Past due 181–360 days	1	–1	0	–
Past due >360 days	1	–1	0	–
Total	**1,686**	**–18**	**1,668**	**125**

Accounts receivable are recognised after accounting for bad debt losses incurred during the year. At the end of the year, the provision for bad debt in the Group amounted to SEK 12 million (18).

Concentration of credit risk in accounts receivable

Group

31 Dec. 2023	No. of customers	% of total number of customers	% of value
Exposure SEK <1 million	854	80	10
Exposure SEK 1–50 million	206	19	64
Exposure SEK >50 million	5	1	26
Total	**1,065**	**100**	**100**

Höganäs considers that the credit quality of financial assets that are neither overdue for payment nor are subject to impairment is high and that there is no need for impairment.

Bad debt provision

Group

SEK m	2023	2022
Balance at the beginning of the year	18	15
Divestment of operations	–	0
Actual bad debt losses	–2	–2
Reversal of previous impairments	–17	–2
Impairment loss for the year	13	7
Total	**12**	**18**

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Note 17 Prepaid expenses and accrued income

	Group		Parent company	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Prepaid interest expenses	1	1	1	–
Prepaid insurance premiums	7	5	–	–
Prepaid supplier invoices	57	41	0	0
Insurance indemnity	–	1	–	–
Market valuation, electricity hedges	–	14	–	–
Reimbursement due in relation to gas hedging	–	18	–	–
Reimbursement due for gas and electricity tax	6	9	–	–
Other items	7	10	–	–
Total	**78**	**99**	**1**	**0**

Note 18 Cash and cash equivalents

	Group		Parent company	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Cash and cash equivalents include the following components:				
Cash and bank balances	600	319	0	0
Short-term deposits	–	0	–	–
Total	**600**	**319**	**0**	**0**

Cash and cash equivalents include an amount of SEK 430 million (97) that is not available for use on the Group's behalf without payment of a withdrawal tax.

Short-term investments are classified as cash and cash equivalents if:

- They have a negligible risk of value fluctuations.
- They can be readily converted into cash.
- They have a maximum maturity of three months from the acquisition date.

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Note 19 Equity

Breakdown of equity reserves

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Translation reserve		
Opening translation reserve	638	318
Translation differences for the year	–132	598
Less hedging of currency risk in foreign operations	38	–350
Tax attributable to changes in translation reserve	–3	72
Closing translation reserve, 31 December	**541**	**638**
Hedging reserve		
Opening hedging reserve	180	208
Cash flow hedges		
Changes in fair value	–195	–21
Reclassified to net income	42	–14
Tax attributable to hedges	32	7
Closing hedging reserve, 31 December	**59**	**180**
Total reserves		
Opening reserves	818	526
Change in reserves:		
Translation reserve	–97	320
Hedging reserve	–121	–28
Closing balance, 31 December	**600**	**818**

	Number of shares		Share capital	
Share capital and number of shares, SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
At the start of the period, 1 January	20,000,000	20,000,000	20	20
Closing balance, 31 December	**20,000,000**	**20,000,000**	**20**	**20**

The shares have a nominal value of SEK 1. Holders of ordinary shares are entitled to dividends progressively, and their shareholding entitles them to voting rights at the Annual General Meeting (one vote per share). All shares have equal entitlement to the parent company's remaining net assets.

Reserves

Translation reserve

The translation reserve encompasses all foreign exchange gains and losses that arise when translating the financial statements of foreign operations that have prepared their financial statements in a currency other than the Group's presentation currency. The parent company and the Group present their financial statements in Swedish krona. The translation reserve also comprises foreign exchange gains and losses arising from the revaluation of liabilities reported as hedging instruments for a net investment in a foreign operation.

Hedging reserve

The hedging reserve covers the effective portion of the accumulated net change in the fair value of cash flow hedging instruments attributable to hedging transactions that have not yet occurred.

Retained earnings, incl. net income

Retained earnings, including net income, include profits accrued by the parent company and its subsidiaries as well as revaluation of the pension scheme.

Parent company

Changes in the parent company's equity are shown in the 'Statement of Changes in Equity, parent company' on page 57.

Restricted equity

Restricted reserves may not be reduced through dividends.

Unrestricted equity

Share premium reserve

When shares are issued at a premium, i.e. when more has to be paid for the shares than their nominal price, an amount equivalent to the amount received in excess of the shares' nominal value is transferred to the share premium reserve. The amount transferred to the share premium reserve is included in unrestricted equity.

Fair value reserve

The company applies the Swedish Annual Accounts Act (ÅRL) rules for the valuation of financial instruments at fair value in accordance with chapter 4, paragraph 14 a-e. A change in value is recognised in the fair value reserve when it relates to a hedging instrument and the hedge accounting policies applied allow for part or all of the change in value to be recognised in equity. Changes in value caused by a change in the exchange rate of a monetary item that is part of the company's net investment in a foreign entity are recognised in equity.

Retained earnings, incl. net income

Retained earnings comprise previous year's profit brought forward after the deduction of dividends paid out during the year. Along with net income, share premium reserve and fair value reserve, they comprise total unrestricted equity, i.e. the amount available for distribution to shareholders.

Proposed distribution of profit

Dividend, 20,000,000 shares x SEK 5 per share	100,000,000
Carried forward	6,158,993,880
	6,258,993,880

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Note 20 Interest-bearing liabilities

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Non-current liabilities		
Credit facilities	2,491	3,626
Non-current lease liabilities	283	258
Total	**2,774**	**3,884**
Current liabilities		
Overdraft facilities	96	228
Current lease liabilities	83	77
Total	**179**	**305**

Conditions and repayment periods

Höganäs Holding has credit facilities totalling SEK 5.6 billion. Financing risks including maturity structure are reviewed in more detail in Note 28 on page 96.

As at the end of December 2023, SEK 2,506 million (3,738) of the committed credit facilities had been used and the amount available was SEK 3,046 million (2,948). The committed credit facilities are subject to covenants with regard to net debt in relation to EBITDA and EBITDA in relation to net interest expenses. Both covenants were met with a good margin as at the end of December 2023. Uncommitted credit facilities were SEK 424 million (447), of which SEK 95 million (120) had been used at year-end.

Lease liabilities

The maturity structure for lease liabilities is described in Note 12 Leasing.

Note 21 Other non-current liabilities

	Group		Parent company	
SEK m	31 Dec. 2023	31 Dec. 2022	31 Dec. 2023	31 Dec. 2022
Derivatives held for hedging	34	–	16	–
Government grant, district heating facility	8	11	–	–
Government grant, relocation China*	245	–	–	–
Long-term incentive scheme**	16	–	–	–
Other	8	6	2	–
Total	**311**	**17**	**18**	**–**

* Relates to the relocation of the factory in China to a new area.

**The long-term incentive scheme covers the financial years 2023–2025. This item was reclassified from current to non-current liabilities in 2023.

Note 22 Pensions

Defined contribution plans

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Present value of fully or partly funded obligations	624	613
Fair value of plan assets	–607	–598
Net fully or partly funded obligations	17	15
Present value of unfunded obligations	290	263
Present value of net liabilities	**307**	**278**
The net amount is reported in the following items in the statement of financial position:		
Non-current receivables	7	4
Provisions for pensions	314	282
Net amount in statement of financial position	**307**	**278**

Overview of defined benefit plans

Höganäs has defined benefit plans in Sweden, Germany, Switzerland, Belgium, India and Italy. These are based on the benefits and length of service employees have at or near retirement. Plan assets are in Sweden, Germany, Switzerland, Belgium and India. In the US, the pension plan was settled during the year.

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Note 22 Pensions, contd.

Change in obligation for defined benefit plan

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Defined benefit plan obligation at the beginning of the year	876	1,114
Service expenses in the current year	17	30
Service expenses in previous years	–5	4
Interest expenses	33	18
Revaluations:		
Actuarial gains and losses on changed demographic assumptions	5	–
Actuarial gains and losses on changed financial assumptions	31	–347
Experience-based adjustments	43	35
Employee contributions	1	1
Reductions/Adjustments	–64	0
Benfits paid	–27	–29
Translation differences	4	50
Defined benefit plan obligation at the end of the year	**914**	**876**

Most of the obligations, around 95 percent (88), relate to employees in Sweden, Germany and Switzerland. The present value of the obligations is distributed among the plan members in these countries as follows:

- Active members 45% (45)
- Paid-up pension holders 18% (18)
- Retired employees 37% (37)

Change in fair value of plan assets

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Fair value of plan assets at the beginning of the year	598	648
Interest income recognised in profit or loss	23	12
Fees paid	11	3
Return on plan assets, excluding interest income	39	–78
Employee contributions	2	2
Reductions/Adjustments	–64	–
Benefits paid	–6	–10
Translation differences	4	21
Fair value of plan assets at the end of the year	**607**	**598**

Plan assets have the following components

Group

SEK m	31 Dec. 2023	31 Dec. 2022
Shares and units in equity funds	382	331
Interest-bearing securities incl. bank accounts	225	267
Fair value of plan assets	**607**	**598**

Expenses reported in the income statement

Group

SEK m	2023	2022
Expenses relating to service in the current year	17	30
Expenses relating to service in previous years	–5	4
Interest expense on obligations	33	18
Profit/loss on reduction	–	0
Interest income on plan assets	–23	–12
Total net expenses in the income statement	**22**	**40**

Expenses recognised in the following lines of the income statement

Group

SEK m	2023	2022
Cost of goods sold	11	19
Selling expenses	2	5
Administrative expenses	5	9
Research and development expenses	4	7
Total net expenses in the income statement	**22**	**40**
Actual return on plan assets	62	–66

Expenses recognised in other comprehensive income

Group

SEK m	2023	2022
Revaluations:		
Actuarial gains (–) and losses (+)	79	–312
Difference between actual return and return according to the discount rate on plan assets	–39	78
Special payroll tax	0	–25
Total net expenses in other comprehensive income	**40**	**–259**

Assumptions for defined benefit obligations

Key actuarial assumptions as of the reporting date (expressed as weighted averages):

Group

		31 Dec. 2023	31 Dec. 2022
Discount rate, %		3.1	3.6
Expected return on plan assets, %		3.1	3.6
Future salary increase, %		2.6	2.8
Future increase of pensions, %		1.8	2.1
Life expectancy assumptions after 65 years:			
Sweden	Men	22 years	22 years
	Women	24 years	24 years
Germany	Men	21 years	21 years
	Women	24 years	24 years
Switzerland	Men	23 years	23 years
	Women	25 years	25 years

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Note 22 Pensions, contd.

Sensitivity analysis

Possible changes in actuarial assumptions as of the reporting date, other assumptions unchanged, and how these would affect the defined benefit obligation are presented below.

Group

31 Dec. 2023	Increase	Reduction
Discount rate in Sweden, Germany and Switzerland (0.5% change)	–65	73
Future salary increase in Sweden, Germany and Switzerland (0.5% change)	22	–20
Life expectancy in Sweden (change 1 year)	18	–18

Effects on future cash flows

It is estimated that approximately SEK 31 million will be paid into defined benefit plans in 2024.

Pension obligations

Defined benefit plans

Retirement pension obligations for the majority ofsalaried employees in Sweden are assured through provisions for PRI liabilities. These funds are secured through transfer to an employee pension fund. Other salaried employees have chosen alternative defined contribution pension solutions.

There are no defined benefit obligations in the parent company.

Defined contribution plans

The Group has defined contribution pension plans for its employees in Sweden. These are financed by the companies. Defined contribution plans are also available for those salaried employees who have chosen an alternative defined contribution pension solution. Foreign subsidiaries have defined contribution pension plans which are financed partly by the subsidiaries and partly by employee contributions. Payment into these plans is on an ongoing basis in accordance with each plan's rules.

The costs of defined contribution plans during the year were SEK 120 million (121) in the Group of which SEK 3 million (3) in the parent company.

Note 23 Other provisions

Group

	Costs of dismantling or restoring assets to the condition required		Emission allowances		Special payroll tax		Other		Total	
SEK m	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Carrying amount at the beginning of the period	11	11	5	3	12	34	32	28	60	76
Provisions in the period	0	0	166	141	–1	3	3	11	168	155
Amounts utilised during the period	–	–	–171	–139	–	–0	–5	–5	–176	–144
Change resulting from altered assumptions	–	–	–	–	–	–25	2	–2	2	–27
Carrying amount at the end of the period	**11**	**11**	**–**	**5**	**11**	**12**	**32**	**32**	**54**	**60**
Of which total long-term portion of provisions	11	11	–	–	11	12	30	29	52	52
Of which total short-term portion of provisions	–	–	–	5	–	–	2	3	2	8

Parent company

	Special payroll tax	
SEK m	**2023**	**2022**
Carrying amount at the beginning of the period	6	6
Provisions in the period	1	0
Amounts utilised during the period	–	–
Carrying amount at the end of the period	**7**	**6**
Of which total long-term portion of provisions	7	6
Of which total short-term portion of provisions	–	–

Costs of dismantling or restoring assets to the condition required

Most of these total costs are provisions for restoring a damming area for landfill. At the beginning of the year, these provisions amounted to SEK 9 million. The estimated provision for the remaining commitments is SEK 9 million. Due to the long-term nature of the liability, the biggest uncertainty lies in estimating the provision for the costs that will arise. Based on estimated future production volume, the useful life is estimated at three years.

Emission allowances

Emission allowances for CO_2 were received during the year at a market value of SEK 179 million. The emission allowances used are recognised as current provisions. The short-term provision is settled when used emission allowances are reported back to the Swedish Energy Agency. See also accounting policies Note 1, section r, (x).

Special payroll tax

This heading includes provisions for special payroll tax attributable to defined benefit pensions and capital insurance.

Other

The two largest items in total other items are SEK 17 million (16) in personnel-related provisions and SEK 9 million (7) in provisions for legal disputes.

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Note 24 Liabilities to credit institutions

Parent company

SEK m	31 Dec. 2023	31 Dec. 2022
Non-current liabilities		
Bank loans*	2,492	3,626
Current liabilities		
Bank loans	–	–
Liabilities that become due for payment more than five years after the reporting date		
Bank loans	–	–

* Financing risk including maturity structure is reviewed in more detail in Note 28 on page 96.

Note 25 Accrued expenses and deferred income

	Group		Parent company	
SEK m	31 Dec. 2023	31 Dec. 2022	31 Dec. 2023	31 Dec. 2022
Holiday pay liability	130	129	2	2
Social security contributions	69	68	2	2
Bonuses to customers	37	39	–	–
Invoices not received	124	110	–	0
Staff bonuses	69	114	–	3
Freight costs	11	17	–	–
Prepaid emission allowances	210	171	–	–
Decommissioning of production facility	6	1	–	–
Interest	3	4	2	3
Deferred income	5	7	–	–
Other items	66	52	10	0
Total	**730**	**712**	**16**	**10**

Note 26 Pledged assets and contingent liabilities

	Group		Parent company	
SEK m	31 Dec. 2023	31 Dec. 2022	31 Dec. 2023	31 Dec. 2022
Pledged assets				
For own liabilities and provisions				
Property mortgages	56	60	–	–
Total	**56**	**60**	**–**	**–**
Contingent liabilities				
Pension liabilities	8	7	8	7
Guarantees on behalf of subsidiaries	–	–	386	385
Guarantees, other	26	23	–	–
Total	**34**	**30**	**394**	**392**

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Note 27 Exchange rates

		Closing rate on reporting date		Average rate	
Country	**Local currency**	**31 Dec. 2023**	**31 Dec. 2022**	**2023**	**2022**
Brazil	BRL	2.0695	1.9746	2.1263	1.9619
EMU	EUR	11.0960	11.1283	11.4765	10.6317
India	INR *	12.0700	12.6176	12.8500	12.8666
Japan	JPY *	7.0980	7.9167	7.5590	7.7075
China	CNY	1.4133	1.5017	1.4982	1.5020
Korea	KRW *	0.7740	0.8294	0.8124	0.7824
Russia	RUB *	9.5358	9.5358	9.5358	10.8640
Taiwan	TWD	0.3271	0.3405	0.3402	0.3388
Switzerland	CHF	11.9827	11.2915	11.8173	10.5950
UK	GBP	12.7680	12.5811	13.1979	12.4669
United States	USD	10.0416	10.4371	10.6128	10.1245

* Rates of exchange in 100 units.

Note 28 Financial risks

Risks and risk management

Höganäs' operations are characterised by raw materials intensity and its production, customers and competitors being located in a large number of countries, which exposes the company to external changes. With its positioning as market leader in several segments and with operations fairly evenly distributed between Europe, the US and Asia, the company is strongly positioned and has natural risk diversification. However, changing external conditions always create risks and opportunities. The management of operational and financial risks is therefore of central importance. Höganäs works actively to manage the risks so that undesired earnings effects and potential disruption are limited.

Financial risks

Global developments affect exchange rates, interest rates, metal and energy prices. Höganäs has costs and revenue in a number of currencies. In addition, metals and energy are important input goods, resulting in significant exposure to financial risks. Höganäs' financial policy sets out goals, guidelines and risk mandates for how financial risks should be managed. The financial policy covers financing, liquidity management, credit risks, currency risks, interest rate risks and price risks on metals and energy. Höganäs' finance unit is responsible for the Group's management of these risks and serves as an internal treasury. As work is carried out across the Group, strict management of the Group's financial risks and good internal control are safeguarded.

To explain how Höganäs is exposed to financial risks, it is best to start from a review of its business flow. Höganäs purchases metal that is refined into metal powder products. When the products are sold, there is a price adjustment to the current market prices of the metals input into production. Accordingly, from a risk perspective, operations can be viewed as consisting of two parts. The first relates to the purchase and sale of raw materials in the form of metals, the second part is the industrial process of refining the raw materials into metal powder products. Purchases and sales of raw materials create exposure to price changes. The refining process gives rise to exposure to several currencies through goods being produced with costs in certain currencies and sold in markets where, to some extent, payment is in other currencies. In addition, price and currency risks arise as a result of other input goods, costs of capital and energy costs. Each risk is described separately below, alongside an explanation of how the risks are managed.

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Note 28 Financial risks, contd.

Financial risks	Management	Exposure
Price and currency risks when buying and selling metals Purchases are usually made through call-off agreements stating that the price is based on the market price applicable at any time, with a predetermined time delay. Similarly, the sales agreement states that the price of metal powder includes a fixed proportion of raw material, the price of which should be based on the applicable market price, with a predetermined time delay. This means that the price risk arises when the purchase price is determined. The price risk subsequently continues until the day on which the price of the metal powder product that includes the raw material is determined in accordance with the sales agreement. However, currency risk only arises when the purchases are paid for and remains until the receivable is settled. The part of the exposure relating to accounts payable and accounts receivable is managed separately, as described below.	Raw material and currency risks can be limited by hedging the countervalue of the current exposure at any given time within the Group using derivative instruments, primarily forwards. The intention is to minimise the effect of price and exchange rate fluctuations in tandem with purchasing raw materials and selling the raw material component in the metal powder products as far as possible. However, the prospects of eliminating these risks completely are limited by several factors. Firstly, this would require access to perfect information about future business flows, and secondly, there are no effective market places for some metals, which means the cost of price hedging would be unreasonably high. Höganäs used derivative instruments for nickel, copper, molybdenum and cobalt for price hedging in 2023. **Financial policy:** Höganäs' financial policy states that price and currency risks resulting from the purchase and sale of raw materials and raw material content in various products should be 90 percent hedged, providing that there are effective markets for hedging instruments. Deviations are permitted within a risk mandate decided by the Board of Directors.	The total cost of purchasing metals in 2023 was approximately SEK 7.9 billion (8.1). However, Höganäs' average net exposure amounts to a significantly smaller amount. **Sensitivity analysis for some significant metals** Impact on earnings from metal price change; excluding hedges (SEK m): Copper +10% 3 Nickel +10% 22 Molybdenum +10% 17 Cobalt +10% 3 For more information on outstanding hedges, see page 93.
Currency risks in the refinement process The industrial refinement process of raw materials into metal powder products gives rise to exposure in several different currencies. This exposure is dependent on how and where the product is produced, as well as where products are sold. This risk can be reduced for a limited period using derivative instruments. Here too, forecast accuracy of the company's business flows can affect the prospects of eliminating these risks completely.	The goal of the hedging strategy is to eliminate the exchange rate effect from the portion of the sales revenue that corresponds to value-added as far as possible. Accordingly, Höganäs can mitigate the effects of exchange rate fluctuations, especially in the short term, using derivative instruments. In the long term, Höganäs is always exposed to the impact of changing external conditions. Over the long term, Höganäs safeguards itself from currency risks by diversifying its operations to a number of countries and by constantly adapting its operations to changing external conditions. **Financial policy:** Höganäs' financial policy states that the net exposure arising from the refinement process should be hedged up to 80 percent for a horizon of up to 13 months. Deviations are permitted within a risk mandate decided by the Board of Directors.	**Sensitivity analysis for currency** Impact on earnings from exchange rate changes; excluding hedges (SEK m): USD/SEK +10% 151 EUR/SEK +10% 29 CNY/SEK +10% 54 JPY/SEK +10% 36 Others +10% 10 **Total 279** For more information on outstanding hedges, see page 93.
Currency risks on accounts receivable and accounts payable Accounts receivable and accounts payable arise when purchases and sales are recognised. Outstanding accounts receivable and accounts payable are restated at current rates of exchange at the end of each month.	Höganäs hedges net accounts receivable and accounts payable. The goal is to eliminate currency risks as far as possible. Accounts receivable and accounts payable are recognised together with hedging instruments at the rate of exchange on the reporting date, and exchange rate fluctuations are recognised in the income statement. **Financial policy:** The financial policy states that this exposure should be 100 percent hedged. Hedging is for up to two months using forward contracts. Deviations are permitted within a risk mandate decided by the Board of Directors.	Net accounts receivable and accounts payable in 2023 amounted to an average of SEK 675 million (350) per month.
Currency risk on assets denominated in foreign currency Currency risks also arise on the translation of foreign subsidiaries' assets, liabilities and earnings are translated into the Group's presentation currency, termed translation exposure. The Group's presentation currency is Swedish kronor.	Höganäs' policy is that net investment in the form of lending and equity in foreign convertible currencies should be hedged through external borrowing in the same currency. All borrowing should be arranged in the currencies in which the Group has its net investments. If net investment exceeds external borrowing, there is no requirement for the excess portion to be hedged using currency forwards. Höganäs applies hedge accounting to hedges of net investments in subsidiaries, which means that exchange rate effects on the revaluation of loans identified as hedging instruments are recognised in the hedging reserve within equity, via other comprehensive income. **Financial policy:** Höganäs' financial policy states that in currency terms, the company's interest-bearing liabilities should be allocated to match the company's net investments in foreign currencies. If net investments exceed external borrowing, there is no requirement for the excess portion to be hedged using currency forwards. Deviations are permitted within a risk mandate decided by the Board of Directors.	Net investments in foreign subsidiaries amounted to SEK 4,501 million (4,973). The translation difference is reported in Note 19 Equity. For more information on outstanding hedges, see page 93.
Financing risk Financing risk is the risk associated with the Group's financing requirement as a result of loan agreements that expire and an increased requirement for capital.	The objective is that at any time, the Group should have access to committed long-term credit facilities that cover the needs of its operations with a satisfactory margin. Surplus liquidity should be used primarily to amortise interest-bearing liabilities. **Financial policy:** Höganäs' financial policy states that the company should secure access to borrowed capital through credit facilities exceeding an amount decided by the Board of Directors.	Höganäs Holding has committed credit facilities totalling SEK 5.6 billion (6.7). The structure of the credit facility is as follows. EUR 400 million – due June 2026 USD 110 million – due June 2026 Höganäs AB has access to Höganäs Holding's credit facility. The utilised portion at year-end and outstanding volumes of other credit facilities are shown on page 96. As at the end of December 2023, Höganäs Holding met the covenants in all loan agreements with a good margin.

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Note 28 Financial risks, contd.

Financial risks	Management	Exposure
Interest rate risk Interest rate risk is the risk of the Group's net interest income/expense progressing worse than expected given an increase or decrease in interest rates. Höganäs is a net borrower, and accordingly, the Group is exposed to a risk of worse net interest income/expense in the event of rising market interest rates. If fixed-interest periods are too short, an increase in interest rates would have an excessive impact, and if fixed-interest periods are too long, a fall in interest rates would have an excessively slow impact. The selection of fixed-interest period should strike a balance between these extremes, selected on the basis of the company's circumstances.	Höganäs' borrowing within its credit facilities is usually at maturities of three months. The fixed-interest period is then controlled using interest rate derivatives. The financial policy specifies how much of interest-bearing liabilities should be fixed using different maturity intervals. **Financial policy:** Höganäs' financial policy states that the duration should be between 1.5 and 4 years and that the interest rate risk should be limited by 50 percent of its liabilities having a fixed-interest period longer than one year. Deviations are permitted within the stated risk mandates.	At year-end, interest-bearing liabilities were SEK 3,267 million (4,471) and the average fixed-interest period on these liabilities was 2.4 years. Short-term and long-term investments and cash and cash equivalents amounted to SEK 617 million (334) and the average fixed-interest period on these assets is 0 years. **Sensitivity analysis:** A one percentage point interest rate fluctuation would affect the company's net interest income/expense by SEK 2 million (12) in a one-year horizon. For more information on outstanding hedges, see page 93.
Energy price risks Refining metals into metal powder is energy intensive. Höganäs purchases energy in the form of electricity, natural gas and oil.	Future costs for energy purchases are hedged in accordance with the policy using financial derivative instruments or fixed-price contracts from suppliers. By price hedging purchasing in this way, Höganäs secures a slower impact of price increases and evens out variations in annual energy costs. **Financial policy:** Höganäs' financial policy states that energy price risks, natural gas and electricity, should be hedged with predetermined percentage rates over a horizon of up to 18 months. Deviations are permitted within the stated risk mandates.	The Group's purchases of electricity, natural gas and oil amounted to a value corresponding to SEK 942 million (721) in 2023. **Sensitivity analysis** for electricity and natural gas Impact on earnings from price changes; excluding hedges (SEK m): Electricity +10% 16 Natural gas +10% 10 **Total 26** For more information on outstanding hedges, see page 93.
Credit risks – financial Financial credit risks arise through financial contracts that Höganäs enters in tandem with derivative instruments and investments. The financial credit risk for derivative instruments consists of the risk of a counterparty that Höganäs has entered into a derivative contract with becoming insolvent, and that the current market value involves an unrealised receivable that the counterparty cannot pay. Similarly, an investment constitutes a financial credit risk through the investment consisting of a receivable from the counterparty.	Höganäs has binding framework agreements regarding derivatives trading, termed ISDA agreements, with each bank. Höganäs' credit risk is therefore limited through the right to off-set liabilities and receivables. Regarding investments, Höganäs endeavours to follow a similar approach by investments mainly being with those banks with which Höganäs has credit facilities. In addition, there are less investments with local banks that subsidiaries use as transaction banks. **Financial policy:** Höganäs' financial policy stipulates limits on the amount of net receivables from counterparties for derivative instruments and investments.	Höganäs' credit risk exposure at year-end is stated in the table below. See also Note 16 Accounts receivable/credit risk. Accounts receivable 1,549 Cash and cash equivalents 600 Short-term and long-term investments 17 Derivatives (net market value as of 31 Dec. 2023) 32 **Total 2,198**

Operations are conducted on the basis of a financial policy adopted by the Board of Directors, which sets out rules and guidelines for how the various financial risks should be managed. The financial policy identifies the following three material risks – financing risk, market risk and credit risk. Currency, interest rate, metal and energy derivatives are used as hedging instruments in accordance with the guidelines set by the Board of Directors.

Market risks

Market risk is the risk arising through commercial flows in foreign currency that arise in operations (transaction exposure), financing working capital (interest rate risk), investments in foreign countries (translation risk) and energy and raw materials price risk.

(a) Currency risk

(i) Transaction exposure

The main exposure relates to the Group's sales and purchasing in different currencies. These currency risks partly comprise the risk of fluctuations in the value of financial instruments, i.e. accounts receivable and accounts payable, and partly the currency risk in relation to expected and contracted payment flows.
99.2 percent (99.4) of the Group's total sales in 2023 were to countries outside Sweden. Total net revenue in foreign currencies amounted to SEK 12,315 million (12,216). The largest flow currencies were EUR, USD, CNY and JPY.

The objective of Höganäs' currency hedging is to hedge an appropriate portion of the Group's net foreign currency exposure in the short and medium term. The purpose of hedging currency exposure is to even out fluctuations in earnings. The consolidated income statement includes foreign exchange gains and losses of SEK –8 million (–25) in operating income and SEK 14 million (–61) in net financial income/expense.

At year-end 2023, the Group had the following currency hedges for expected payment flows in EUR, USD, JPY and CNY. The main derivatives used are forward contracts. Contract volumes are stated in nominal terms below. Contracts are reported at fair value in the statement of financial position and the cumulative change in value is recognised in equity via other comprehensive income.

When the contract is realised, the cumulative change in value is recognised in the income statement. The effect of currency derivatives on operating income in 2023 amounted to SEK –50 million (–108). The value of outstanding contracts not recognised as income is stated in the table below.

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Note 28 Financial risks, contd.

Outstanding hedges of currency flows

31 Dec. 2023	EUR/SEK Volume[1]	EUR/SEK Rate of exchange[2]	EUR/SEK Fair value, reported as Other short-term receivables/liabilities, SEK m[3]	USD/SEK Volume[1]	USD/SEK Rate of exchange[2]	USD/SEK Fair value, reported as Other short-term receivables/liabilities, SEK m[3]	JPY/SEK Volume[1]	JPY/SEK Rate of exchange[2]	JPY/SEK Fair value, reported as Other short-term receivables/liabilities, SEK m[3]	CNY/SEK Volume[1]	CNY/SEK Rate of exchange[2]	CNY/SEK Fair value, reported as Other short-term receivables/liabilities, SEK m[3]
Q1 2024	7.95	11.40	2	6.0	10.31	2	459	8.14	5	48	1.52	5
Q2 2024	7.95	11.50	3	6.0	10.38	2	459	8.03	4	48	1.51	5
Q3 2024	7.95	11.71	5	6.0	10.73	5	459	7.85	3	48	1.51	5
Q4 2024	7.95	11.43	2	6.0	10.42	3	459	7.57	1	48	1.50	4
Total	**31.8**	**11.51**	**13**	**24.0**	**10.46**	**12**	**1,836**	**7.90**	**12**	**192**	**1.51**	**19**
(31 Dec. 2022)	(31.8)	(10.72)		(36.0)	(9.95)		(1,878)	(7.86)		(180)	(1.48)	
Closing rate on reporting date		11.10			10.04			7.10			1.41	
Value transferred from the hedging reserve to the income statement during the period[4]			–24			–25			4			–5

[1] Volumes are expressed in millions of local currency.
[2] Average forward rate. The exchange rate for JPY/SEK is stated in 100 units.
[3] Change in fair value recognised in the hedging reserve in equity via other comprehensive income when hedge accounting is applied.
[4] The values refer to realised contracts and are recognised in cost of goods sold.

ii) Translation exposure

Currency risks also exist in the translation of foreign subsidiaries' assets, liabilities and earnings to the parent company's functional currency, termed translation exposure.

Höganäs' policy is that net investment in the form of lending and equity in foreign convertible currencies should be hedged through external borrowing in the same currency. All borrowing should be arranged in the currencies in which the Group has its net investments. If net investment exceeds external borrowing, there is no requirement for the excess portion to be hedged using currency forwards.

Höganäs applies hedge accounting to hedges of net investments in subsidiaries, which means that exchange rate effects on the revaluation of loans identified as hedging instruments are recognised in the hedging reserve within equity, via other comprehensive income.

Hedged portion of net assets by currency

SEK m	31 Dec. 2023 Net assets	31 Dec. 2023 Hedged portion	31 Dec. 2023 Carrying amount for hedging instruments, recognised in other comprehensive income	31 Dec. 2023 Change in value of hedging instruments, recognised in net financial income/expense	31 Dec. 2022 Net assets	31 Dec. 2022 Hedged portion	31 Dec. 2022 Carrying amount for hedging instruments, recognised in other comprehensive income	31 Dec. 2022 Change in value of hedging instruments, recognised in net financial income/expense
USD	1,793	66%	49	–	2,199	72%	–219	–
EUR	2,454	54%	–11	–	2,547	64%	–132	–
JPY	92	0%	–	–	78	0%	–	–
GBP	163	0%	–	–	149	0%	–	–
Total	**4,502**		**38**	**–**	**4,973**		**–351**	**–**

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Note 28 Financial risks, contd.

(b) Interest rate risk

Interest rate risk is the risk that the Group's net interest income/expense deteriorates when market interest rates change. Höganäs Holding is a net borrower and the Group is exposed to a risk of deterioration in net financial income/expense accordingly when market interest rates rise.

At year-end, interest-bearing liabilities were SEK 3,263 million (4,471) and the average fixed-interest period was 2.4 years (2.0) including interest rate swaps and 0.1 years (0.3) excluding interest rate swaps. Short-term and long-term investments and cash and cash equivalents were SEK 617 million (334) and the average fixed-interest period on these assets was less than one year. Höganäs Holding's borrowing facilities are usually arranged with maturities of three months. The fixed-interest period is then controlled using interest rate swaps. See further information under financing risk.

Fixed-interest period including interest rate swaps and maturity dates

SEK m, 31 Dec. 2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
SEK	969	166	333	523	444	166	0	0	2,601

Hedge accounting is applied to the swaps, which means that the change in the fair value of swaps is recognised in the hedging reserve via other comprehensive income. As at the reporting date, the nominal value of these swaps amounted to SEK 2,737 million (3,278) and their fair value was SEK 70 million (163) net.

Interest rate swaps

		31 Dec. 2023	31 Dec. 2022
SEK m	**Items in the statement of financial position for fair value accounting**	**Fair value**	**Fair value**
Interest rate swaps, USD	Non-current receivables	19	69
	Other receivables	18	4
	Other non-current liabilities	–	–
	Other liabilities	–	–
Interest rate swaps, EUR	Non-current receivables	49	85
	Other receivables	–	5
	Other non-current liabilities	–16	–
	Other liabilities	–	–
Total		**70**	**163**

Reference rate reforms

There has been a global reform of reference interest rates, which has meant, among other things, that certain interbank interest rates (IBOR) have been replaced with new interest rates. In 2023, the US Libor was replaced by SOFR. The Group's loans and derivatives that were previously linked to the US Libor are now linked to SOFR.

The Group's nominal exposure in hedged hedge relationships to SOFR was SEK 1,105 million as at 31 December, which represents the nominal amount of both the interest rate swaps that constitute hedging instruments and the nominal amount of the portion of the Group's USD loans that are identified as hedged items.

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Note 28 Financial risks, contd.

(c) Energy and raw material risk

A significant portion of Höganäs' operations consists of buying and selling metals. The Group buys metals and sells metal powder products, where selling prices are adjusted for the price of the metals included in the product. Refining metals into metal powder is energy intensive. Höganäs' raw material price risk mainly arises in copper, nickel and molybdenum. Changes in value from raw material derivatives are recognised in the hedging reserve in equity via other comprehensive income.

(i) Electricity and gas

Höganäs' production consumes a substantial amount of energy. The Group's purchasing of electricity, oil and natural gas amounted to the equivalent of SEK 942 million (721) in 2023.

(ii) Metals

Metal derivatives are used to reduce exposure to changes in raw material prices. In 2023, the price risk of nickel, copper, molybdenum and cobalt was hedged. Hedging is effected mainly using standard financial derivatives listed daily on the London Metal Exchange (LME). For metals not listed on the LME, price hedging can be effected through fixed-fee contracts with suppliers.

Outstanding hedges on electricity and gas

	Electricity		Gas	
31 Dec. 2023	**Volume[1]**	**Price[2]**	**Volume[1]**	**Price[2]**
Due 2024	169	1,098	141	582
Due 2025	66	786	44	517
Total	**235**		**185**	
Spot price on reporting date		457		332
Fair value, reported as Other short-term receivables/liabilities, SEK m[3]		–70		–34
Value transferred from the hedging reserve to the income statement during the period, SEK m[4]		–56		–61

[1] Volume is expressed in GWh.
[2] Average forward price in SEK/MWh.
[3] Change in fair value recognised in the hedging reserve in equity on cash flow hedges, where hedge accounting is applied. This item relates to changes in the value of derivative instruments relating to future energy purchases.
[4] The values refer to realised contracts and are recognised in cost of goods sold.

Outstanding hedges on copper, molybdenum, cobalt and nickel

	Copper			Molybdenum			Cobalt			Nickel		
31 Dec. 2023	**Volume[1]**	**Price[2]**	**Fair value, reported as Other short-term receivables/liabilities, SEK m[3]**	**Volume[1]**	**Price[2]**	**Fair value, reported as Other short-term receivables/liabilities, SEK m[3]**	**Volume[1]**	**Price[2]**	**Fair value, reported as Other short-term receivables/liabilities, SEK m[3]**	**Volume[1]**	**Price[2]**	**Fair value, reported as Other short-term receivables/liabilities, SEK m[3]**
January 2024	250	8,561	0	31	49,248	3	10	33,069	0	1,137	16,849	5
February 2024	–	–	–	56	48,686	3	15	34,024	0	–	–	–
March 2024	–	–	–	45	50,242	2	15	34,024	0	–	–	–
April 2024	–	–	–	37	41,551	–1	5	35,935	0	–	–	–
May 2024	–	–	–	30	39,536	–2	12	30,409	0	–	–	–
June 2024	–	–	–	20	40,124	–1	12	30,409	0	–	–	–
July 2024	–	–	–	20	40,785	–1	4	31,416	0	–	–	–
Total	**250**	**8,561**	**0**	**238**	**45,408**	**2**	**72**	**32,725**	**1**	**1,137**	**16,849**	**5**
Spot price on reporting date		8,476			48,700			29,961			16,300	

Change in value (SEK m) recognised in Hedging reserve as of reporting date (all metals)[3]	7
Value transferred from the hedging reserve to the income statement during the period (all metals)[4]	64

[1] Volume is expressed in tonnes.
[2] Average forward price in USD.
[3] Change in fair value recognised in the hedging reserve in equity via other comprehensive income, where hedge accounting is applied. This item relates to changes in the value of derivative instruments relating to changes in raw material prices.
[4] The values refer to realised contracts and are recognised in cost of goods sold.

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Note 28 Financial risks, contd.

Financing risk

Financing risk is the risk that the Group encounters problems accessing borrowed capital. The objective is that at any time, the Group should have access to committed long-term credit facilities that cover the needs of its operations with a satisfactory margin. Refinancing was carried out in 2023. The term of the new facility is three years with two one-year extension options. The new facility consists of a term loan of USD 110 million and a MCRF of EUR 400 million.

The Höganäs Holding credit facility totals SEK 5.6 billion (6.7) and is structured as follows.

Credit facilities	Maturity structure, 31 Dec. 2023
USD 110 million	June 2026
EUR 400 million	June 2026

As at the end of December 2023, SEK 2,506 million (3,738) of the committed credit facilities had been utilised and the amount available was SEK 3,046 million (2,948). The committed credit facilities are subject to covenants with regard to net debt in relation to EBITDA and EBITDA in relation to net interest expenses. Both covenants were met with a good margin as at the end of 2023 December. Uncommitted credit facilities were SEK 424 million (447), of which SEK 95 million (120) had been used at year-end.

Financial liabilities

The following maturity analyses illustrate the contracted undiscounted cash flows for the Group's financial liabilities allocated to the stated time intervals. The cash flows of interest-bearing liabilities cover repayments of principal and payment of interest. Future interest payments have been estimated on the basis of those liabilities on the reporting date. Interest payments of liabilities accruing variable interest have been measured on the basis of current market rates on the reporting date. For interest rate swaps, the net of the interest to be paid or received respectively is stated in the relevant time interval as it is the net cash flow that is swapped.

	31 Dec. 2023								
Maturity, SEK m	**Jan–Jun 2024**	**Jul–Dec 2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Credit facilities	76	76	153	2,583	–	–	–	–	–
Current interest-bearing liabilities	179	–	–	–	–	–	–	–	–
Accounts payable	1,121	–	–	–	–	–	–	–	–
Derivative outflow	82	42	19	–	5	6	5	–	–
Derivative inflow	–94	–27	–1	–3	–5	–19	–27	–14	–
Total	**1,364**	**91**	**171**	**2,580**	**0**	**–13**	**–22**	**–14**	**–**

	31 Dec. 2022								
Maturity, SEK m	**Jan–Jun 2023**	**Jul–Dec 2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Credit facilities	82	82	3,713	–	–	–	–	–	–
Current interest-bearing liabilities	305	–	–	–	–	–	–	–	–
Accounts payable	1,227	–	–	–	–	–	–	–	–
Derivative outflow	144	18	9	–	–	–	–	–	–
Derivative inflow	–174	–87	–53	–6	–10	–21	–45	–23	–
Total	**1,584**	**13**	**3,669**	**–6**	**–10**	**–21**	**–45**	**–23**	**–**

The parent company serves as financial backer to subsidiaries. Subsidiaries have local overdraft facilities, which have been approved by the parent company.

Financial receivables by credit rating

	31 Dec. 2023					
SEK m	**Cash in banks**	**Currency hedges**	**Metal price hedges**	**Electricity hedges**	**Natural gas hedges**	**Interest rate derivatives**
Most counterparties have the lowest rating A- (S&P) or A3 (Moody's)	617	90	7	–	–	87

Credit risk

Credit risk can be divided into commercial and financial counterparty risk. Commercial counterparty risk is the risk that one of the Group's customers becomes insolvent and that sales forecasts or hedged flows cannot be realised.

To some extent, Höganäs' credit risk relating to customers is limited through sales taking place in a large number of countries to a large number of customers, thus achieving risk diversification. There is credit insurance of approximately USD 12 million that is intended to reduce the credit risk of customers in the US. Höganäs also uses export letters of credit when selling in certain markets.

At year-end, the single largest credit exposure amounted to SEK 134 million (93). The Group's credit policy stipulates that credit checks precede all sales to new customers. Further information on bad debt can be found in Note 16.

Financial counterparty risk is the risk of a counterparty that Höganäs has entered a contract with becoming insolvent and that an investment and/or unrealised gain cannot be repaid. Höganäs has binding framework agreements regarding derivatives trading, termed ISDA agreements, with each bank. The agreements mean that Höganäs can off-set financial liabilities against financial assets if the counterparty becomes insolvent or another similar event occurs, termed netting. The tables below show the amounts covered by such netting agreements.

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Note 28 Financial risks, contd.

31 Dec. 2023, SEK m	Available-for-sale	Financial liabilities
Amount reported in the statement of financial position	184	152
Amount covered by netting	–78	–152
Amount after netting	**106**	**–**

31 Dec. 2022, SEK m		
Amount reported in the statement of financial position	392	144
Amount covered by netting	–153	–144
Amount after netting	**239**	**–**

Credit risk exposure, SEK m	31 Dec. 2023	31 Dec. 2022
Accounts receivable	1,549	1,668
Cash and cash equivalents	600	319
Short-term and long-term investments	17	15
Derivatives	184	392
Total	2,350	2,394

Höganäs' credit risk exposure at year-end is stated in the above table. See also Note 16 Accounts receivable/credit risk.

Fair value and carrying amount of financial assets and liabilities reported in the consolidated statement of financial position

The carrying amounts of interest-bearing assets and liabilities in the statement of financial position may differ from fair value, for reasons including changes in market interest rates. To measure the fair value of financial assets and liabilities, official quoted rates have been used for the assets and liabilities traded on an active market. In cases where no reliable market quotes are available, fair value has been determined by discounting future payment flows using current market interest rates, which are then translated to Swedish kronor using the current rate of exchange. Because interest-bearing financial assets have very short fixed-interest periods, the fair value is deemed to be the same as the carrying amount.

For financial instruments such as accounts receivable, accounts payable and other non-interest-bearing financial assets and liabilities, which are reported at amortised cost less any impairment, the fair value is deemed to be the same as the carrying amount.

The following table states fair values and carrying amounts of financial assets and liabilities reported in the consolidated statement of financial position.

SEK m, 31 Dec. 2023	Financial assets and liabilities measured at FVTPL[1]	Derivatives designated as hedging instruments	Financial assets at amortised cost	Financial liabilities at amortised cost	Total carrying amount	Total fair value
Non-current receivables	7	69	55	–	131	131
Accounts receivable	–	–	1,549	–	1,549	1,549
Other receivables	24	149	–	–	173	173
Cash and cash equivalents	–	–	600	–	600	600
Short-term and long-term investments	–	–	17	–	17	17
Total	**31**	**218**	**2,221**	**–**	**2,470**	**2,470**
Non-current interest-bearing liabilities	–	–	–	3,103	3,103	3,103
Current interest-bearing liabilities	–	–	–	179	179	179
Accounts payable	–	–	–	1,121	1,121	1,121
Other liabilities	20	121	–	–	141	141
Total	**20**	**121**	**–**	**4,403**	**4,544**	**4,544**
SEK m, 31 Dec. 2022						
Non-current receivables	4	156	56	–	216	216
Accounts receivable	–	–	1,668	–	1,668	1,668
Other receivables	35	357	–	–	392	392
Cash and cash equivalents	–	–	319	–	319	319
Short-term and long-term investments	50	–	15	–	65	65
Total	**89**	**513**	**2,058**	**–**	**2,660**	**2,660**
Non-current interest-bearing liabilities	–	–	–	4,166	4,166	4,171
Current interest-bearing liabilities	–	–	–	305	305	305
Accounts payable	–	–	–	1,227	1,227	1,227
Other liabilities	44	100	–	–	144	144
Total	**44**	**100**	**–**	**5,698**	**5,842**	**5,847**

1) Fair value option is not applied.

Note 28 Financial risks, contd.

Valuation hierarchy

All financial instruments measured at fair value in the statement of financial position should be assigned to one of the following three tiers in the fair value hierarchy:

Level 1

Financial instruments whose fair value is measured according to prices quoted on an active market for the same instrument, such as exchange-traded standard derivatives for electricity, gas and metals.

Level 2

Financial instruments whose fair value is measured on the basis of either directly (as price) or indirectly (has its origin in prices) observable market data that are not included in Tier 1. For example, certain OTC-traded products such as interest rate swaps and currency forwards.

Level 3

Financial instruments whose fair value is measured on the basis of input data that are not observable on the market.

	Level 1		Level 2		Level 3	
SEK m	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**	**31 Dec. 2023**	**31 Dec. 2022**
Assets						
Non-current receivables	–	2	69	154	–	–
Other receivables	0	245	105	41	–	–
Total	**0**	**247**	**174**	**195**	**–**	**–**
Liabilities						
Other non-current liabilities	–18	–	–16	–	–	–
Other liabilities	–86	53	–21	91	–	–
Total	**–104**	**53**	**–37**	**91**	**–**	**–**

Insurable risks

Höganäs AB has centralised non-life and professional indemnity cover for the Group. Although local insurance cover is required in some countries, in cases where such cover does not satisfy the Group's minimum standards, cover is achieved through umbrella coverage using Höganäs AB's Master Insurance Policy.

Capital management

The Group's objective is to have a favourable capital structure and financial stability. This is an important basis for continued development of business operations. Capital is defined as total equity including non-controlling interests.

SEK m	31 Dec. 2023	31 Dec. 2022
Capital		
Share capital	20	20
Other contributed capital	6,948	6,948
Translation reserve	541	638
Hedging reserve	59	180
Retained earnings, incl. net income	4,105	3,758
Non-controlling interests	0	0
Total	**11,673**	**11,544**

Note 29 Related parties

The parent company exerts a controlling interest over its subsidiaries, see Note 13. Business terms and market pricing apply to the supply of services and products between Group companies. Intra-Group transactions and dealings between subsidiaries are stated below. The Group's transactions with senior executives in the form of salaries and other remuneration, benefits, pensions and agreements on severance pay to the Board of Directors and CEO are stated in Note 5.

Parent company

	Höganäs AB		Lindéngruppen AB		FAM AB	
SEK m	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Transactions reported in the income statement:						
Sales of goods and services to related parties	6	23	–	–	–	–
Purchase of services from related parties	–	–	–	–	–	–
Other (interest, dividend)	–119	–46	–	–	–	–
Transactions reported in the balance sheet:						
Due from related parties as of 31 December	3	–	–	–	–	–
Due to related parties as of 31 December	3,019	2,042	–	–	–	–
Dividend recognised in equity	–	–	–	–70	–	–130

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Note 30 Significant accounting estimates and judgements

Group management and the Board of Directors make estimates and assumptions regarding the future. These estimates and assumptions affect the accounts and other financial information presented, including contingent liabilities. The estimates are based on historical experience and various assumptions considered reasonable under the prevailing circumstances. The conclusions drawn form the basis for decisions regarding the carrying amounts of assets and liabilities in cases where they cannot be measured through other information. Actual outcomes may differ from these estimates if other assumptions are made or other circumstances arise. Areas that involve various estimates and assumptions that may have a material impact on the Group's earnings and financial position include, for example:

Impairment testing of goodwill and trademarks with an indefinite useful life

The Group continually tests for impairment in accordance with the accounting policies described in Note 1. Impairment testing is based on a review of the recoverable amount. The value is estimated on the basis of management's assessment of future cash flows which are based primarily on internal business plans, financial budgets and forecasts.

The Group's impairment testing of goodwill and trademarks is carried out for the working Höganäs Group as it is considered to be the lowest cash-generating unit for the ongoing monitoring of this item from the perspective of the highest executive decision-makers (see Notes 1 and 10, respectively). On 31 December 2023, recognised goodwill amounted to SEK 6,198 million (6,272) and trademarks to SEK 1,100 million (1,109).

When testing for impairment, a management assessment is required of various factors, particularly with regard to events which may affect the value of goodwill, the assumptions underlying cash flow forecasts and whether the discounting of these cash flows is reasonable. Changes in the assumptions made by the management may result in a different outcome and a different future financial position. For further information on impairment testing of goodwill, see Note 10.

Calculation of income tax and measurement of loss carry-forwards

Estimates are made to determine both current and deferred tax assets or liabilities, especially for deferred tax assets. In this context, the likelihood that the deferred tax assets will be used for off-setting against future taxable profits is estimated. The fair value of these future taxable gains may differ in terms of future business conditions and earning capacity or changes in tax rules. Deferred tax assets related to tax losses carry-forwards of SEK 132 million (159) have been reported in the Group, based on an assessment that they are likely to be utilised and result in lower tax payments in the future. The majority of these deferred tax assets relate to losses in Germany.

Calculations of employee benefits

The net liabilities relating to defined benefit plans amounted to SEK 307 million (278) at year-end. The value of pension obligations for defined benefit plans is based on actuarial calculations based on assumptions regarding discount rates, future salary increases, inflation and demographic conditions. Most net liabilities are attributable to defined benefit plans in Germany at SEK 279 million (253). A description of the most significant actuarial assumptions and sensitivity analysis is provided in Note 22. Changes in assumptions, which result in actuarial gains or losses, as well as experience-based adjustments give rise to revaluation of net liability and are recognised in other comprehensive income. Revaluation in the year increased the Group's net liability by SEK 40 million (–259).

Calculation of right-of-use assets and lease liabilities

The carrying amount of right-of-use assets amounted to SEK 337 million (298) and lease liabilities SEK 366 million (335) at the end of 2023.

Some subjective estimates and assessments are made in connection with the reporting of leases, both in terms of the possibility/probability of exercising options to extend, terminate and purchase, estimated useful life of a lease that is extended on an ongoing basis if neither party actively terminates the lease and actual expected useful life of the asset under existing leases. Such estimates and assessments primarily affect the magnitude of the reported right-of-use assets and lease liabilities.

From a materiality perspective, the most important leases for the Group relate primarily to property leases where these estimates and assessments can have a material effect on the financial position. Höganäs has a number of open-ended leases, mainly relating to properties, which do not have a clearly defined end date or limitations in terms of the number of possible extension options. In many countries, local laws and regulations provide protection for lessees from being given notice. This requires Höganäs, as a lessee, to determine a reasonable contract period instead of considering the termination clause. The lessee determines the length of the contract term based on factors such as the importance of the property to the business, any planned or completed leasehold investments and the property market situation.

Furthermore, a component that affects the carrying value of leases in the Group's financial position is the underlying discounting rate. This is based on the individual country's risk-free interest rate plus a business-specific risk premium. When calculating the carrying value, Höganäs applies an incremental interest rate for the relevant currency and individual contract term that is assessed as relevant, with the aim of best reflecting lease-related assets and financial obligations in a fair manner.

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Note 31 Breakdown of statement of cash flows

Reconciliation of liabilities arising from financing activities

Group

SEK m	1 Jan. 2022	Cash flow	Non-cash changes: Accrual of transaction costs	New leases	Foreign exchange gains and losses	Other	31 Dec. 2022
Credit facilities	3,394	–123	5	–	350	–	3,626
Overdraft facilities	200	19	–	–	9	–	228
Lease liabilities	333	–94	–	55	41	–	335
Other non-current liabilities	73	0	–	–	–	–56	17
Total	**4,000**	**–198**	**5**	**55**	**400**	**–56**	**4,206**

SEK m	1 Jan. 2023	Cash flow	Non-cash changes: Accrual of transaction costs	New leases	Foreign exchange gains and losses	Other	31 Dec. 2023
Credit facilities	3,626	–1,086	–10	–	–38	–	2,492
Overdraft facilities	228	–127	–	–	–6	–	95
Lease liabilities	335	–101	–	141	–9	–	366
Other non-current liabilities	17	261	–	–	1	32	311
Total	**4,206**	**–1,053**	**–10**	**141**	**–52**	**32**	**3,264**

Parent company

SEK m	1 Jan. 2022	Cash flow	Non-cash changes: Accrual of transaction costs	New leases	Foreign exchange gains and losses	Other	31 Dec. 2022
Credit facilities	3,394	–123	5	–	350	–	3,626
Overdraft facilities	–	–	–	–	–	–	–
Lease liabilities	–	–	–	–	–	–	–
Other non-current liabilities	26	0	–	–	–	–26	0
Total	**3,420**	**–123**	**5**	**0**	**350**	**–26**	**3,626**

SEK m	1 Jan. 2023	Cash flow	Non-cash changes: Accrual of transaction costs	New leases	Foreign exchange gains and losses	Other	31 Dec. 2023
Credit facilities	3,626	–1,086	–10	–	–38	–	2,492
Overdraft facilities	–	–	–	–	–	–	–
Lease liabilities	–	–	–	–	–	–	–
Other non-current liabilities	0	0	–	–	–	18	18
Total	**3,626**	**-1,086**	**–10**	**0**	**–38**	**18**	**2,510**

Divestment of subsidiaries

Group

SEK m	2023	2022
Divested assets and liabilities:		
Intangible assets	–	15
Property, plant and equipment	–	11
Deferred tax assets	–	4
Inventories	–	25
Operating receivables	–	9
Cash and cash equivalents	–	6
Total assets	**–**	**70**
Non-current interest-bearing liabilities	–	2
Deferred tax liabilities	–	0
Current operating liabilities	–	14
Total provisions and liabilities	**–**	**16**
Net assets as above	–	54
Consideration transferred	–	450
Capital gains	**–**	**396**
Consideration transferred	–	450
Less: Contribution in kind received as payment	–	–106
Consideration received	**–**	**344**
Less: Cash and cash equivalents in divested operations	–	–6
Impact on cash and cash equivalents	**–**	**338**

Note 32 Significant events after the reporting period

No events, that are considered to be significant, occurred between the end of the period and the signing of this Annual Report.

Auditor's report

To the general meeting of the shareholders of Höganäs Holding AB, corporate identity number 556915-6655

Report on the annual accounts and consolidated accounts

Opinions

We have audited the annual accounts and consolidated accounts of Höganäs Holding AB for the year 2023. The annual accounts and consolidated accounts of the company are included on pages 41–100 in this document.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the parent company as of 31 December 2023 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act. The consolidated accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of the group as of 31 December 2023 and their financial performance and cash flow for the year then ended in accordance with International Financial Reporting Standards (IFRS), as adopted by the EU, and the Annual Accounts Act. The statutory administration report is consistent with the other parts of the annual accounts and consolidated accounts.

We therefore recommend that the general meeting of shareholders adopts the income statement and balance sheet for the parent company and the consolidated income statement and consolidated statement of financial position for the group.

Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Other matter

The audit of the annual accounts and consolidated accounts for the financial year 2022 was performed by another auditor who submitted an auditor's report dated 30 March 2023, with unmodified opinions in the Report on the annual accounts and consolidated accounts.

Other Information than the annual accounts and consolidated accounts

This document also contains other information than the annual accounts and consolidated accounts and can be found on pages 1–40 and 103–120. The Board of Directors is responsible for the other information.

Our opinion on the annual accounts and consolidated accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts and consolidated accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts and consolidated accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors

The Board of Directors is responsible for the preparation of the annual accounts and consolidated accounts and that they give a fair presentation in accordance with the Annual Accounts Act and, concerning the consolidated accounts, in accordance with IFRS as adopted by the EU. The Board of Directors is also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts and consolidated accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts and consolidated accounts, The Board of Directors is responsible for the assessment of the company's and the group's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors intends to liquidate the company, to cease operations, or has no realistic alternative but to do so.

Auditor's responsibility

Our objectives are to obtain reasonable assurance about whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts and consolidated accounts.

A further description of our responsibility for the audit of the annual accounts and consolidated accounts is available on Revisorsinspektionen's website: www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

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Auditor's report, contd.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts and consolidated accounts, we have also audited the administration of the Board of Directors of Höganäs Holding AB for the year 2023 and the proposed appropriations of the company's profit or loss.

We recommend to the general meeting of shareholders that the profit be appropriated dealt with in accordance with the proposal in the statutory administration report and that the members of the Board of Directors be discharged from liability for the financial year.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the Auditor's Responsibilities section. We are independent of the parent company and the group in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Responsibilities of the Board of Directors

The Board of Directors is responsible for the proposal for appropriations of the company's profit or loss. At the proposal of a dividend, this includes an assessment of whether the dividend is justifiable considering the requirements which the company's and the group's type of operations, size and risks place on the size of the parent company's and the group's equity, consolidation requirements, liquidity and position in general.

The Board of Directors is responsible for the company's organization and the administration of the company's affairs. This includes among other things continuous assessment of the company's and the group's financial situation and ensuring that the company's organization is designed so that the accounting, management of assets and the company's financial affairs otherwise are controlled in a reassuring manner.

Auditor's responsibility

Our objective concerning the audit of the administration, and thereby our opinion about discharge from liability, is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the company, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Our objective concerning the audit of the proposed appropriations of the company's profit or loss, and thereby our opinion about this, is to assess with reasonable degree of assurance whether the proposal is in accordance with the Companies Act.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the company, or that the proposed appropriations of the company's profit or loss are not in accordance with the Companies Act.

A further description of our responsibility for the audit of the administration is available on Revisorsinspektionen's website www.revisorsinspektionen.se/revisornsansvar. This description is part of the auditor's report.

Malmö 2 April 2024
Öhrlings PricewaterhouseCoopers AB

Eric Salander	Carl Fogelberg
Authorized Public Accountant	*Authorized Public Accountant*
Auditor in charge	

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Definitions

Risk-bearing capital, %
Total equity and deferred tax liability in relation to total assets.

Return on equity
Net income in relation to average equity.

Return on capital employed
Earnings before tax plus net interest and exchange rate differences on financial loans in relation to average capital employed.

Net liability
Interest-bearing liabilities less cash and cash equivalents.

Investments
Investments in fixed assets excluding acquisitions.

Capital turnover rate
Net sales in relation to average capital employed.

Net margin
Earnings before tax in relation to Net sales.

Cash flow from operations
Cash flow after investments but before acquisitions or divestments of companies/operations.

Interest coverage ratio
Operating income in relation to net financial income/expense.

Operating margin
Operating income in relation to Net sales.

Debt/equity ratio
Interest-bearing debt less cash and cash equivalents and other interest-bearing receivables in relation to equity.

Equity/asset ratio
Total equity in relation to total assets.

Capital employed
Total assets less non-interest-bearing liabilities, deferred tax liabilities and other provisions.

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Five-year summary

SEK m	2023	2022	2021	2020	2019
Net sales	12,334	12,256	10,527	8,645	10,343
Operating profit/loss	716	1,121	1,091	669	688
Financial income and expenses	–126	–180	–118	–163	–219
Earnings before tax	590	941	973	506	469
Net income	377	779	747	300	259
Operating margin, %	5.8	9.1	10.4	7.7	6.7
Net margin, %	4.8	7.7	9.2	5.9	4.5
Total assets	17,997	19,012	17,711	16,517	17,660
Equity	11,673	11,544	10,476	9,886	9,806
Capital employed	14,940	16,015	14,869	14,183	15,333
Return on capital employed, %	4.6	7.3	7.5	4.5	4.5
Return on equity, %	3.2	7.1	7.3	3.0	2.7
Equity ratio, %	64.9	60.7	59.1	59.9	55.5
Net liability	2,667	4,152	4,181	4,033	5,300
Debt/equity ratio, multiple	0.23	0.36	0.40	0.41	0.54
Risk-bearing capital, %	68.4	64.6	63.5	64.0	59.6
Interest coverage ratio, multiple	5.7	6.2	9.2	4.1	3.1
Rate of capital turnover, multiple	0.80	0.79	0.72	0.59	0.67
Operating cash flow	1,359	492	582	1,062	1,102
Cash flow after investments	1,359	492	582	1,062	1,075
Investments	841	656	399	351	701
Average number of employees	2,250	2,360	2,282	2,300	2,454
Turnover per employee	5.48	5.19	4.61	3.76	4.21

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Governance

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Board of directors

Magnus Hall
Chairman
M.Sc

Born 1959
Chairman of the Board and board member since 2021

Previous positions CEO of Vattenfall and CEO of Holmen.

Robert Hermans
M.Sc (BA & Econ) & MBA

Born 1968
Board member since 2023

CEO of IPCO

Previous positions Deputy CEO, Executive Vice President, Gunnebo Lifting, Group Regional Manager Africa, Executive Vice President Gunnebo Entrance Control.

Anna Månsson
M.Sc (Mechanical Engineering)

Born 1977
Board member since 2021

Management consultant and partner at Bain & Co

Previous positions Strategy&, Robert Bosch GmbH.

Paul Schrotti
LL.M (Master of Laws)

Born 1967
Board member since 2018

CEO of Lindéngruppen AB, Chairman of Becker Industrial Coatings AB and Colart Group Holdings Ltd. Board member of Lindéngruppen AB and Axel Johnson International AB, and Senior Advisor to Keyhaven Capital Partners Ltd.

Previous positions at Axel Johnson, EQT Partners, KPMG, Electrolux and IKEA.

Kristian Sildeby
M-Sc (Econ.)

Born 1976
Board member since 2013

Investment Director & Deputy CEO of FAM AB. Chairman of 82an Invest. Board member of Munters, Nefab, Kivra and Spendrups.

Previous positions Vice President, Head of Finance and Risk Management, Investor AB.

Charlotte Strömberg
MBA (Econ.)

Born 1959
Board member since 2021

Vice Chair, Sofina SA. Board member of Kinnevik AB, Clas Ohlson AB and Lindéngruppen AB. Member of the Swedish Securities Council. Co-Founder of DHS Ventures and angel investor.

Previous positions CEO JLL Nordics, leading positions Carnegie Investment Bank and Alfred Berg/ABN Amro.

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Board of directors

Erik Urnes
B.Eng. (Mechanical Engineering), MBA

Born 1971
Board member since 2009

Vice Chairman of Lindén-gruppen AB.

Previous positions CEO of Lindéngruppen AB, Chairman of Becker Industrial Coatings Holding AB and ColArt International Holdings Ltd. Strategy Consultant, Bain & Company, Investment Manager Browallia Ltd and Reuters Greenhouse Fund, CEO of ColArt International Holdings, CEO of AB Wilh. Becker.

Anna Bengtsson
Employee representative on the Board of Directors

Born 1984
Deputy member since 2021

Chairman of IF Metall at Höganäs in Halmstad.

Lisa Kjellén
Employee representative on the Board of Directors

B.Sc (Chemical engineering)

Born 1978
Board member since 2018

Peter Olsérius
Employee representative on the Board of Directors

Military Officer

Born 1961
Deputy member since 2021

Vice Chairman of Unionen trade union at Höganäs.

Tony Petersson
Employee representative on the Board of Directors

Born 1966
Board member since 2006.

Chairman of IF Metall at Höganäs in Höganäs.

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Group management

Henrik Ager
Group President and CEO
M.Sc in Accounting & Finance

Employed since 2023
Born 1969

Previous positions CEO of Copperstone Resources AB, Business Area President of Sandvik Mining and Rock Solutions, Division President of Sandvik Rock tools, Vice President Strategy of Sandvik Mining, Partner at McKinsey.

Kennet Almkvist
President Customization Technologies
Henley M.B.A., Chemistry

Employed since 2018
Born 1961

Previous positions Vice President global Sales & Marketing Division Surface Technology & advanced Ceramic and Metal Powders H.C.Starck GmbH, Member of the Board Metasphere Technology AB, Vice President Division Surface Technology & advanced Ceramic and Metal Powders H.C.Starck GmbH, Head of Branch Office Scandinavia H.C.Starck GmbH, Business Unit Manager Bayer Nordic AB, Nordic Sales & Marketing Manager Silicones Bayer Nordic AB.

Magnus Eriksson
Chief Financial Officer
M.Sc in Business Administration and Economics

Employed since 2018
Born 1969

Previous positions VP Finance and IT, Sandvik Hyperion. Sandvik Mining and Construction. Cardo Door AB, Metso Minerals, Svedala Industri AB.

Dean Howard
President Americas
B.Sc Marketing

Employed since 2000
Born 1969

Previous positions Senior Vice President Sales at Höganäs.

Katarina Jarring
General Counsel
B.Sc (Master of Law)

Employed since 2022
Born 1970

Previous positions Director Connection and Services, E.ON Energidistribution, General Counsel, ASSA ABLOY Entrance Systems, SVP Legal, Strategy and Services, E.ON Sweden, Director Grid Business Development, E.ON, various management positions at E.ON, Mannheimer Swartling Law Firm.

Andreas Jähnke
President Electro & Mechanical Technologies
Military Officer

Employed since 2020
Born 1977

Previous positions Executive Vice President Product & Technology at Haldex, Senior Vice President R&D at Haldex, Global Project Director at Haldex and Manager Program Management at BorgWarner.

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Group management

Therese Jönmark
Senior Vice President Human Resources & Communications
B.Sc. Human Resources

Employed since 2022
Born 1969

Previous positions Managing Director at E.ON Customer Services, Communication & HSSE Director at E.ON Sweden, Head of HR at E.ON Sweden, Head of HR at Sigma Management AB.

Hans Keller
President Surface & Joining Technologies
Dr. rer. nat. (Material Science) / Diploma Mineralogy

Employed since 2019
Born 1963

Previous positions VP Business Development at Oerlikon Metco, VP Strategic Marketing at Oerlikon Metco, VP Marketing at Sulzer Metco, Director Business Development at United Coatings Group Italy, VP Sales & Marketing Business Line Surface Technology & Ceramics at H.C. Starck and various other positions within H.C. Starck.

Richard Molin
Senior Vice President Operations
M.Sc. Mechanical Engineering, M.B.A.

Employed since 1999
Born 1974

Previous positions Vice President Operations APAC, Country Manager Korea, Supply Chain Manager at Höganäs.

Sunil Muralidharan
Acting President APAC
B.E (Electrical Engineering), MBA

Employed since 2019
Born 1974

Previous positions Country Manager at Höganäs in India, Head of Supply Chain and Business Unit Head at 3M India, Senior Vice President Business & Operations at Vaxia, Country Product Head LCD Displays at Samsung India.

Shashi Shukla
President EMEA
Dipl.-Ing. Mechanical Engineering

Employed since 2018
Born 1969

Previous positions CEO Surface Technology & Ceramic Powders H.C. Starck, VP Business Development GKN Powder Metallurgy, Managing Director Europe/Asia, Hoeganaes Corporation, Commercial Director GKN Aftermarket & Services.

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Sustainability appendix

Materiality assessment

The initial materiality assessment took place in 2016 and was followed by a comprehensive stakeholder dialogue and materiality assessment aligned with GRI Standards in 2019. This assessment has since been updated annually. Our material topics are organised into five focus areas and can be found in the introduction for each category, starting on page 18.

During 2023, we took initial steps on a new double materiality assessment in preparation for EU's Corporate Sustainability Reporting Directive (CSRD). The final outcome of the assessment and gap analysis of our current reporting and management framework may impact next year's reporting content.

The results confirm that our most critical material topics by far in the Environmental category are focused on climate change mitigation and adaption. Other material topics, which of course are related to climate change, are emissions to air, energy use, biodiversity and circular economy.

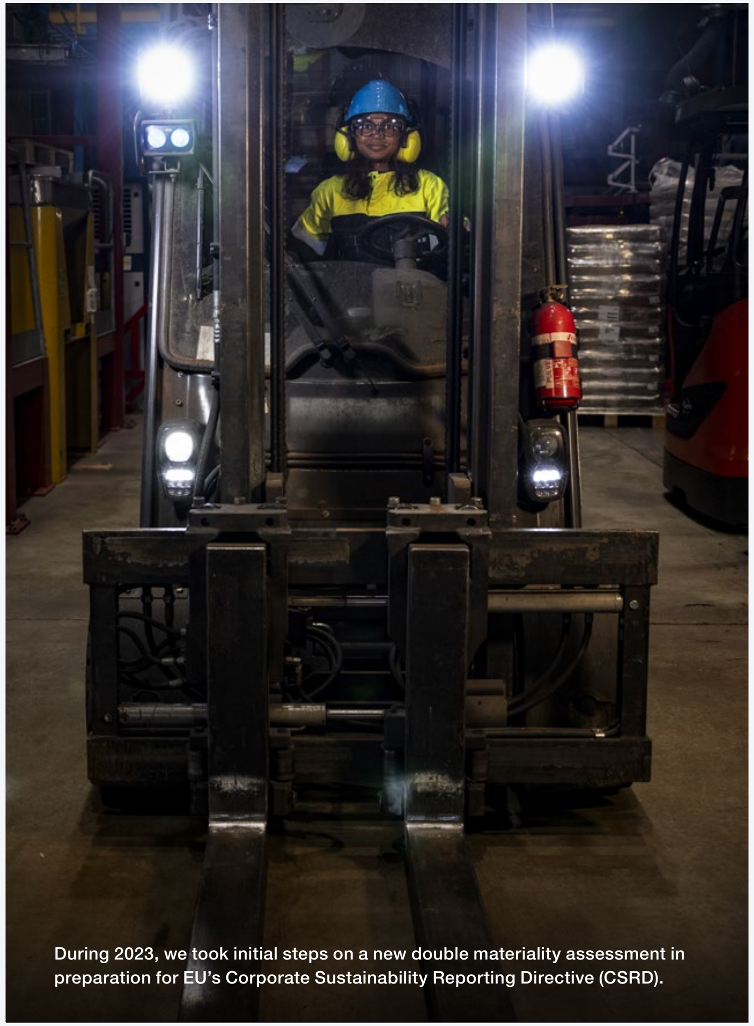
In the Social category, the health and safety of our own workforce is still paramount. For the other workplace related subjects, we have made finer distinctions and elevated diversity and inclusion, and workplace conduct as material topics. This does not diminish the importance of other factors related to our own work force but highlights our commitment to improve the overall work environment for our workforce.

Conditions of workers in the value chain is also a material topic. While we realise that we have an impact, we cannot presently claim to have full control on what the working conditions are. We will keep touting our leading principles to our suppliers and work to improve our visibility into these issues.

In the Governance category, our topics include business conduct, corruption and bribery, and relationship with suppliers.

A first view on how our current focus areas align with the ESG (Environmental, Social and Governance) categories in CSRD is presented below.

	CLIMATE	WORKPLACE	PRODUCTS	ENVIRONMENT	SOCIETY
E	×		×	×	
S		×			×
G			×		×



During 2023, we took initial steps on a new double materiality assessment in preparation for EU's Corporate Sustainability Reporting Directive (CSRD).

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Stakeholder dialogue

The last major stakeholder dialogue was conducted as part of the materiality assessment in 2019. Since then, we have had continuous dialogue with stakeholders. In 2022, we added three stakeholder groups: NGOs, Potential/Future co-workers, Customers' customers.

Stakeholder group	Method
Owners	Board meetings and owner inquiries.
Board members (non-owners)	Board meetings.
Group Management	Group management meetings, ongoing dialogue, and day-to-day engagement.
Customers	Bi-annual customer surveys, received complaints and R&D projects where we collaborate with customers, end-users, and university/research institutes.
Suppliers	Meetings and evaluations.
Co-workers	Team meetings, performance and development discussions and input from formal forums with union representatives.
Union representatives	Board meetings, negotiations, works councils and spontaneous communication.
Neighbours	Public consultation meetings at production sites. Information through website, social media, and various local communication channels. Participation in public debate.
Local communities	Partnerships through our non-profit projects and hands-on contribution based on an assessment of opportunity and need.
Financiers and investors	Individual meetings and surveys.
Academia	Participation in research projects, partnerships with universities, development of educational materials.
Non-governmental organisations (NGOs)	Partnerships, common projects sharing of expertise and reports.
Potential/future co-workers	Trainee programme. Employer branding towards future and graduate engineers and other needed competences. Participation in University open house days, public debate, utilising social channels and other communication channels
Customers' customers	Reach through, and together with, our customers. Participation in public debate and utilising social media and other communication channels. Joint development projects.

Sustainability governance

The ultimate responsibility and decision-making authority for Höganäs sustainability performance and compliance with statutory and regulatory compliance lies with the Board of Directors (BOD), which is the company's highest governing body. For a presentation of the Board members, see page 106–107.

Implementation of the sustainability agenda is delegated through the CEO, which is appointed by the BOD, to Group Management and from there, further down in the organisation. All Group Management members are responsible for sustainability within their respective area. See page 108–109 for a presentation of Group Management.

The Vice President Group Sustainability has the overall responsibility to drive and co-ordinate the sustainability agenda as the head of the Group Sustainability Function. This hosts several cross-functional working groups to ensure sharing of knowledge and best practices, policy compliance and progress towards set targets.

To streamline decision making, a new sustainability board with members from Group Management was tested during the year. The board's permanent members are CEO, CFO, COO, the President of PA-Powder Metallurgy and the Vice President Group Sustainability. Other members of the Group Management team and other functions are included as needed. The effectiveness of the sustainability board will be evaluated towards the end of the year.

Sustainability objectives and performance are regularly communicated internally. Activities to achieve our targets are identified, agreed on and integrated into the business plan that the BOD approves. Progress on these activities and targets is followed up and reported to the BOD and sustainability performance is discussed at every BOD meeting. Relevant policies, certifications and legal statements are available at www.hoganas.com

The double materiality assessment that was performed towards the end of the year, may lead to changes in how sustainability is managed at Höganäs. These changes are being prepared and will be elaborated in next year's report.

Board procedures, selection and evaluation

Members of the BOD are appointed by the General Meeting and proposed by the Nomination committee which consists of representatives from the owners. The Nomination committee meets annually or as needed to evaluate the BOD's work and its composition. Input to the Nomination committee comes from the annual evaluation of the BOD that is led by the Board Chair. Board members' competences on sustainability matters are part of the criteria assessed by the Nomination committee.

The BOD's Rules of Procedure require members to inform the Chair about circumstances that may affect either their personal interests or those of a company with which they have an affiliation, and not to participate in handling such matters. This obligation to refrain from involvement has no influence on the requirements for a quorum when passing resolutions. Board members are also obliged to inform about engagements in any company other than Höganäs.

Business dealings between the company and governing bodies or related parties are to be conducted on the same terms and conditions as with independent third parties.

Management philosophy

Our sustainability governance is based on internationally agreed principles and objectives such as the UN Sustainable Development Goals and the 10 principles of the UN Global Compact as well as national and regional legislation.

In addition, the Höganäs vision and our management philosophy, More Höganäs, as well as our Code of Conduct guide us on how to act in different situations.

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305-1	Direct (Scope 1) GHG emissions	Climate		22
305-2	Energy indirect (Scope 2) GHG emissions	Climate		22
305-3	Other indirect (Scope 3) GHG emissions	Climate		23
305-4	GHG emissions intensity	Climate		22
305-5	Reduction of GHG emissions	Climate		21–23
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Environment		26
Waste				
GRI 306:	**WASTE 2020**			
306-1	Waste generation and significant waste-related impacts	Products		31–32
306-2	Management of significant waste-related impacts	Products		31–32
306-3	Waste generated	Products		31–32
306-4	Waste diverted from disposal	Products		31–32
306-5	Waste directed to disposal	Products		31–32
Supplier environmental assessment				
GRI 308:	**SUPPLIER ENVIRONMENTAL ASSESSMENT 2016**			
308-1	New suppliers that were screened using environmental criteria	Society		38
308-2	Negative environmental impacts in the supply chain and actions taken	Society		38
Employment				
GRI 401:	**EMPLOYMENT 2016**			
401-1	New employee hires and employee turnover	Workplace		34
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Workplace		35
401-3	Parental leave	Workplace		35–36

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GRI indicator		Reference	Omission reason	Page
Labour/management relations				
GRI 402:	**LABOUR/MANAGEMENT RELATIONS 2016**			
402-1	Minimum notice periods regarding operational changes	Workplace		35
Occupational health and safety				
GRI 403:	**OCCUPATIONAL HEALTH AND SAFETY 2018**			
403-1	Occupational health and safety management system	Workplace		36
403-2	Hazard identification, risk assessment, and incident investigation	Workplace		36
403-3	Occupational health services	Workplace		36
403-4	Worker participation, consultation, and communication on occupational health and safety	Workplace		36
403-5	Worker training on occupational health and safety	Workplace		36
403-6	Promotion of worker health	Workplace		36
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Society		38–39
403-8	Workers covered by an occupational health and safety management system	Workplace		36
403-9	Work-related injuries	Workplace		36
403-10	Work-related ill health	Workplace		36
Training and education				
GRI 404:	**TRAINING AND EDUCATION 2016**			
404-1	Average hours of training per year per employee	Workplace		35
404-2	Programs for upgrading employee skills and transition assistance programs	Workplace		34–35
404-3	Percentage of employees receiving regular performance and career development reviews	Workplace		34–35
Diversity and equal opportunity				
GRI 405:	**DIVERSITY AND EQUAL OPPORTUNITY 2016**			
405-1	Diversity of governance bodies and employees	Workplace		35
Non-discrimination				
GRI 406:	**NON-DISCRIMINATION 2016**			
406-1	Incidents of discrimination and corrective actions taken	Workplace		33–34
Freedom of association and collective bargaining				
GRI 407:	**FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING 2016**			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Society		38–39
Child labour				
GRI 408:	**CHILD LABOUR 2016**			
408-1	Operations and suppliers at significant risk for incidents of child labour	Society		38–29

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GRI INDEX

GRI indicator		Reference	Omission reason	Page
Forced or compulsory labour				
GRI 409:	**FORCED OR COMPULSORY LABOUR 2016**			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	Society		38–39
Local communities				
GRI 413:	**LOCAL COMMUNITIES 2016**			
413-1	Operations with local community engagement, impact assessments, and development programs	Society		38
Supplier social assessment				
GRI 414:	**SUPPLIER SOCIAL ASSESSMENT 2016**			
414-1	New suppliers that were screened using social criteria	Society		38–39
414-2	Negative social impacts in the supply chain and actions taken	Society		38–39
Public policy				
GRI 415:	**PUBLIC POLICY 2016**			
415-1	Political contributions	Society		38
Marketing and labeling				
GRI 417:	**MARKETING AND LABELING 2016**			
417-1	Requirements for product and service information and labeling	Products		30
417-2	Incidents of non-compliance concerning product and service information and labeling	Products		30
417-3	Incidents of non-compliance concerning marketing communications	Products		30
Customer privacy				
GRI 418:	**CUSTOMER PRIVACY 2016**			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Society		38

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About the sustainability report

This report presents the sustainability performance of Höganäs Holding AB (Höganäs Group hereinafter defined as the Group) in 2023. The report has been approved by the Höganäs Board of Directors.

The previous report was published on 31 March, 2023, and the reporting is annual. There are no significant changes in reporting content other than this being a combined Annual and Sustainability Report.

As the operational responsibility for the Höganäs Group is delegated to Höganäs AB's Board of Directors, the Sustainability Report focuses on Höganäs AB and its subsidiaries. Höganäs Group is privately owned by FAM (50 percent) and Lindéngruppen (50 percent) and the owners are represented on Höganäs AB's Board of Directors.

The data presented includes all companies within the Group Höganäs AB, with its headquarters located in Höganäs, Sweden, and its subsidiaries. The list of entities included in the consolidated financial statements is found in note 13 on page 81. Any exceptions are commented on.

The report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021 and in accordance with the Swedish Annual Accounts Act's (Årsredovisningslagen) requirements for disclosure of non-financial information.

Management approach, boundaries, omissions, and additional explanations are found in connection to each topic. The report consists of a descriptive part and a GRI index with references. The digital publication on hoganas.com/sustainabilityreport is the main publication and the official combined Annual and Sustainability Report.

This report has not been audited by a third party except for a limited assurance engagement related to the consolidated carbon footprint from Scope 1, 2 and 3 for 2023 performed by PwC. See the appendix Auditor's limited assurance statement on Höganäs Holding AB's climate footprint Scope 1, Scope 2 and Scope 3.

The report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021 and in accordance with the Swedish Annual Accounts Act's (Årsredovisningslagen) requirements for disclosure of non-financial information.

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Methodology for GHG emissions calculations

Höganäs reports its Greenhouse Gas (GHG) emissions according to the organisational control approach. This includes operations at all Höganäs' sites (including headquarters, warehouses, production units, R&D, laboratories and offices). Höganäs consolidates emissions for public reporting on a Group level.

Only carbon dioxide (CO_2) emissions are reported in scope 1. Based on estimations, emissions from the gases CH_4 and N_2O, HFCs, PFCs, SF_6 and NF_3 are considered insignificant, and therefore excluded. These other greenhouse gases are however included in scope 2 and 3 and expressed as CO_2e.

Scope 1 and 2 are calculated according to the GHG Protocol – Corporate Accounting and Reporting Standard. Scope 3 is calculated according to the GHG Technical Guidance for Calculating Scope 3 Emissions. Table 1 shows the reporting categories included in the calculation, and the type of emission factors and data used. A recalculation is performed every 5th year or if a significant change to data, inventory boundary, or methods trigger a recalculation. The threshold for a recalculation is five percent per scope. In the case of 'Purchased Goods & Services', a new calculation method has been applied for spend based emissions of category 1 items (~20% of this category). The calculation method now applied uses DEFRA emission factors on a more granular level of subcategories, hence historical data have been recalculated. Furthermore, for 2018 and 2019 values for category 1 raw materials and consumables from the German plants (Goslar, Laufenburg) have been estimated and added to previously reported total values.

Reporting categories	Calculation method and emission factors used
SCOPE 1	
Fuels for production, internal transports by company-controlled vehicles and directly controlled auxiliary use.	Combustion emissions. Calculated based on consumption. Emission factors are local or default emission factors from ENS (the Danish Energy Agency). We use emission factors from ENS because we buy a big part of our natural gas for the Swedish operations from Denmark and ENS updates their emission factors yearly.
Material used in furnace processes	Emissions calculated based on carbon content and mass balance where the remaining carbon content in output materials are deducted from the carbon content in incoming materials.
SCOPE 2	
Electricity	**Location-based** Regional 2023 International Energy Agency (IEA) CO_2e emission factors. **Market-based** Supplier-specific emission factors if available. Where no supplier-specific emissions factor is available, regional residual fuel mixes have been used. For markets where residual fuel mix factors are not available, emission factors for regional production mixes are used. Emission factors in scope 2 do not include emissions associated with transmission and distribution losses. These are reported in scope 3.
Heating and Cooling	Emissions are calculated on activity data and supplier specific emission factor if available. Where no supplier specific emission factor is available, emission factors from DEFRA Conversion Factors 2023 or alternatively Swedenergy (Energiföretagen) Environmental values district heating, 2021 (Sweden)[1] are used.
SCOPE 3	
Category 1 Purchased goods and services	Cradle-to-gate emissions for purchased goods, services not included. Emission factors from Ecoinvent 3.7.1 (2013). Otherwise, global average data is used. The Scope 3 emissions for our raw materials and consumables are calculated on a volume basis, using the amounts consumed annually during production. The emissions originating from other items (representing less than 20% of total spend of total purchased goods) are calculated according to the spend-based method.

1) https://www.energiforetagen.se/statistik/fjarrvarmestatistik/miljovardering-av-fjarrvarme/

Reporting categories	Calculation method and emission factors used
Category 2 Capital goods	Cradle-to-gate emissions for capital goods. Emissions have been calculated from spend, with an Inflation factor of 11.3% applied to the 2011 emission factor values related to the Construction Process in Exiobase 3.
Category 3 Fuel and energy related activities	Upstream emissions of purchased fuels and energy. Calculated using average upstream emission factors for fuels and energy from DEFRA 2023, T&D losses included.
Category 4 Upstream transportation and distribution	Calculated according to the distance-based method. Life cycle emission factors from DEFRA 2023, EFDB, EPA, EcoTransIT, NTM and CCWG.
Category 5 Waste generated in operations	Calculated according to the waste-type-specific method using emission factors from DEFRA 2023.
Category 6 Business travel	For 2018–2021 emissions related to business travel are allocated based on a study done by Höganäs in 2010 and extrapolated for further years based on pro rata basis on actual travel expenses. For 2022 and 2023, compiled business travel data from the Swedish and North American travel agencies for air, rail and car rentals have been used. The volume of business travel in private vehicles are collected from 'Aditro' travel expenses. The combined US and Sweden data is extrapolated pro rata to estimate the Group emissions in category 6 using emission factors from DEFRA 2023.
Category 7 Employee commuting	Emissions related to employee commuting are calculated on the basis of the number of employees commuting to work, weeks worked per year (47), days worked per week (5), commuting distance covered (30 km) and using a reference EF from DEFRA 2022 database.
Category 9, 10, 11 and 12 Downstream transportation and distribution, Processing of sold products, use of sold products, and end of life treatment	In line with the GHG Protocol Scope 3 standard for intermediate products with various end uses (Section 6.4), categories 9, 10, 11 and 12 are excluded from the GHG inventory and the target boundary.
Category 8, 13, 14 and 15 Upstream leased assets, Downstream Leased Assets, Franchises and Investments	Höganäs does not have any leased assets, nor any Downstream Leased Assets or Franchises, nor do have investments or otherwise act as financial provider outside the value chain, meaning that the categories 13, 14 and 15 are not applicable.
Biogenic CO_2 emissions Emissions from the use of biobased fuels and materials	Biogenic CO_2 emissions from use of biofuels and biocarbon. Calculated based on supplier-specific data and emission factors from DEFRA 2023.

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Auditor's limited assurance statement on Höganäs Holding AB's climate footprint Scope 1 and Scope 2 and Scope 3 for 2023

To the management of Höganäs Holding AB, corporate identity number 556915-6655

We have undertaken a limited assurance engagement of the consolidated Carbon Footprint from Scope 1, Scope 2 and Scope 3 for the reporting period 2023-01-01 – 2023-12-31 that will be reported to Höganäs Holding AB's stakeholders. The CO_2 emissions that were the subject of our limited assurance engagement are found in the Sustainability Report for 2023 on page 22–23.

Höganäs Holding AB's reporting entities' responsibility for the Carbon Footprint

Höganäs Holding AB are responsible for the preparation of the Carbon Footprint in accordance with the applicable criteria "The Green House Gas Protocol". This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of a Carbon Footprint that is free from material misstatement, whether due to fraud or error. Quantifications related to the Carbon Footprint are also subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The audit firm applies ISQM 1 (International Standard on Quality Management) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We are independent in relation to Höganäs Holding AB according to generally accepted auditing standards in Sweden and have fulfilled our professional ethics responsibility according to these requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Carbon Footprint based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements ("ISAE 3410"), issued by the International Auditing and Assurance Standards Board. That standard requires that we plan and perform this engagement to obtain limited assurance about whether the Carbon Footprint is free from material misstatement.

A limited assurance engagement undertaken in accordance with ISAE 3410 involves assessing the suitability in the circumstances of Höganäs Holding AB's use of "The Green House Gas Protocol" as the basis for the preparation of the Carbon Footprint, assessing the risks of material misstatement of the Carbon Footprint whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Carbon Footprint. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. Our review has, based on an assessment of materiality and risk, among other things included the following procedures:

- Assessment of suitability and application of criteria in respect to stakeholders' need of information.
- Analytical review of the reported Carbon Footprint from the reporting entities in scope.
- Evaluation of routines used for the collection, calculation and reporting of the Carbon Footprint from the reporting entities in scope.
- Review of the calculation of the Carbon Footprint from the reporting entities in scope.
- Review of underlying documentation, on a test basis.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether Höganäs Holding AB's Carbon Footprint have been prepared, in all material respects, in accordance with "The Green House Gas Protocol".

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Höganäs Holding AB's Carbon Footprint for the reporting period 2023-01-01 – 2023-12-31 for Scope 1, Scope 2 and Scope 3 are not prepared, in all material respects, in accordance with the above stated criteria.

Malmö 2 April 2024

Öhrlings PricewaterhouseCoopers AB

Eric Salander
Authorized Public Accountant

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Auditor’s report on the statutory sustainability report

This is a literal translation of the Swedish original report

To the general meeting of the shareholders in Höganäs Holding AB, corporate identity number 556915-6655.

Engagement and responsibility

It is the Board of Directors who is responsible for the statutory sustainability report for the year 2023 on pages 18–40 and 110–120 and that it has been prepared in accordance with the Annual Accounts Act.

The scope of the audit

Our examination has been conducted in accordance with FAR’s auditing standard RevR 12 The auditor’s opinion regarding the statutory sustainability report. This means that our examination of the statutory sustainability report is substantially different and less in scope than an audit conducted in accordance with International Standards on Auditing and generally accepted auditing standards in Sweden. We believe that the examination has provided us with sufficient basis for our opinion.

Opinion

A statutory sustainability report has been prepared.

Malmö 2 April 2024

Öhrlings PricewaterhouseCoopers AB

Eric Salander
Authorized Public Accountant

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Höganäs

Höganäs Holding AB
263 83 Höganäs, Sweden

Tel +46 42 33 80 00
www.hoganas.com