



# ENVIRONMENTAL REPORT 2024

Updated environmental report for the  
Linz, Steyrling and Traisen locations



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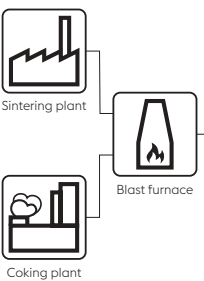
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The content of the updated Environmental Report 2024 complies with the requirements of EMAS III Regulation No. 1221/2009 as amended in 2018/2026 and refer to the validated locations in Linz, Steyrling and Traisen and the respective companies voestalpine Stahl GmbH, voestalpine Grobblech GmbH, voestalpine Giesserei Linz GmbH, voestalpine Giesserei Traisen GmbH & Co KG, voestalpine Camtec GmbH, voestalpine Steel & Service Center GmbH, voestalpine Standortservice GmbH, Logistik Service GmbH, Cargo Service GmbH and voestalpine Automotive Components Linz GmbH & Co KG. The industry-specific reference document (EU) 2021/2053 of the European Commission was taken into account in the preparation of Environmental Statement 2024.

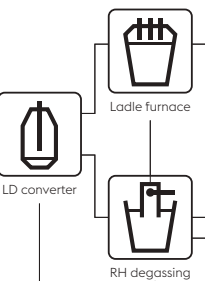
This document is a translation of the validated German document.

# PRODUCTION PROCESSES

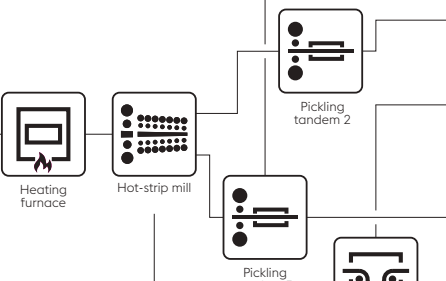
## HOT METAL PRODUCTION



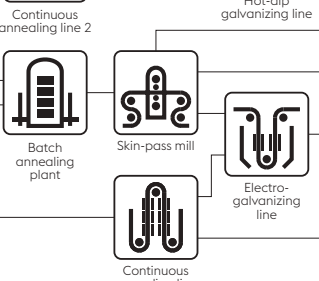
## STEELMAKING AND CASTING



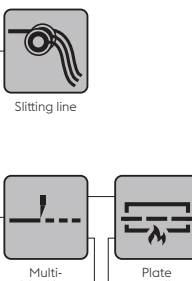
## ROLLING



## SURFACE TREATMENT

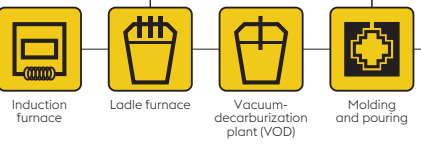


## PROCESSING

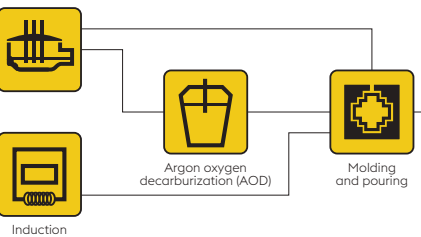


- voestalpine Stahl GmbH
- voestalpine Camtec GmbH
- voestalpine Böhler Bleche GmbH & Co KG
- voestalpine Giesserei Linz GmbH
- voestalpine Giesserei Traisen GmbH und Co KG
- voestalpine Grobblech GmbH
- voestalpine Steel & Service Center GmbH

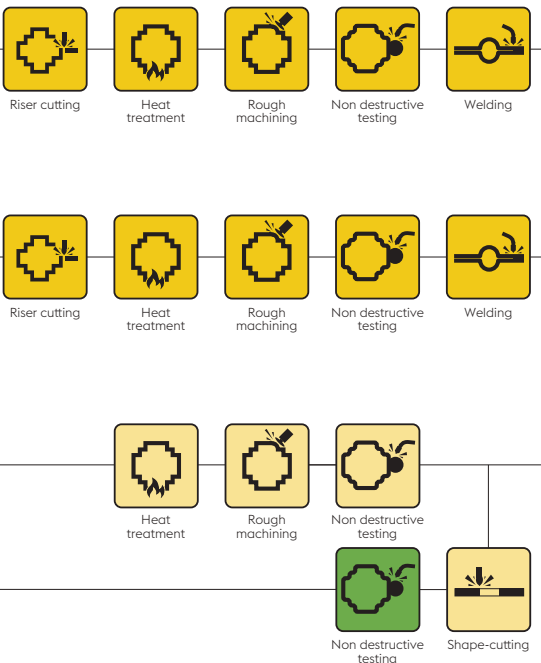
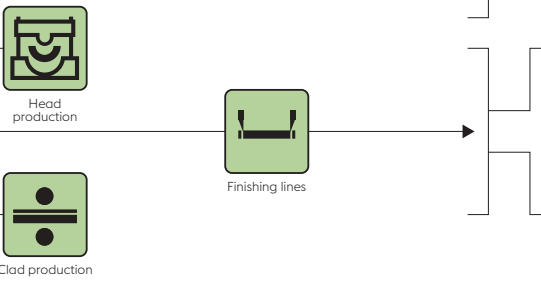
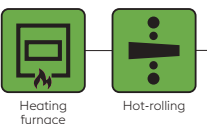
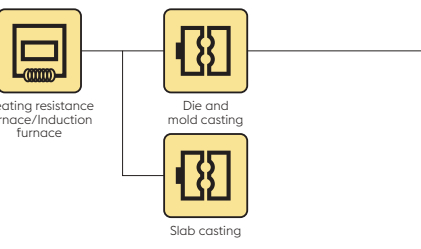
Steel Casting Linz



Steel Casting Traisen



Non-ferrous metal casting



Ironmaking at the Linz site comprises the production of coke in the coke plant, sinter as a burden feedstock in the agglomerating plant, hot metal in blast furnaces A, 5 and 6, the mining and processing of limestone and further processing to quicklime at the Steyrling site.

In the steelmaking plant, crude steel is processed from hot metal after deep desulfurization in the LD converter and is cast into slabs. Foundry companies produce high-tech foundry products from crude steel, at the Linz site following the vacuum decarbonization plant (VOD) and at the Traisen site following the argon-oxygen decarburization plant (AOD).

Strip and heavy plate products are made from the cast slabs in rolling mills.

In order to maintain the highest quality standards, steel strips made by voestalpine are further processed during finishing processes (hot-dip galvanizing, electrogalvanizing and organic coating). In the field of heavy plates, the refining process comprises the production and pressing of (clad) plates and heads. Cast parts are machined in the foundries.

Customers can be provided with tailor-made products delivered by the voestalpine LogServ Group. These products include tailor-made, laser-welded blanks produced by voestalpine Automotive Components. The infrastructural services of voestalpine Standortsservice GmbH at the Linz site provide support for the entire process.

# CLIMATE PROTECTION MEASURES

The greentec steel climate protection program, with which voestalpine wants to achieve net zero emissions by 2050 at the latest, is being implemented on schedule.

## greentec steel: the forward-looking climate protection program of voestalpine

The voestalpine Group is gradually implementing greentec steel, which is an ambitious step-by-step program. greentec steel comprises all the activities and innovations of voestalpine along the pathway to steel production with net-zero emissions. By 2029, as part of the Science Based Targets Initiative (SBTi), the voestalpine Group will reduce the sum of Scope 1 and Scope 2 emissions by 30% and Scope 3 emissions by 25% as compared to the 2019 reference year. Target achievement in 2029 is subject to external variables such as raw material supply, energy supply and the economy. The greentec steel program envisages various technological options with high potentials of reducing carbon emissions. The step-by-step program provides voestalpine with a certain degree of flexibility in order to be able to react to changing conditions while limiting the business risk to a manageable extent.

The first step of greentec steel comprises an investment volume of roughly 1.5 billion euros that will help fund two green-powered electric arc furnaces to be installed at the Linz and Donawitz sites. Two coal-based blast furnace units will be decommissioned. A mix of charging elements such as scrap, hot metal and hot-briquetted iron (HBI) is used to meet specific quality requirements. voestalpine sources

the required HBI primarily from the direct reduction plant in Corpus Christi, Texas, which has been majority-owned by a global steel producer since 2022. voestalpine owns 20% of the company with purchase agreements that have been secured for the long term.

Meanwhile, decisions have been made for the production areas and suppliers, and construction of the electric arc furnaces has commenced. The Austrian Federal Government granted the amount of roughly 90 million euros as part of the „Transformation of Industry“ program. Completion of the environmental impact assessment in preparation for the required power grid upgrade has been completed at both locations.

The long-term approach of voestalpine to achieve net-zero emissions by 2050 at the latest is in line with the EU emissions trading targets and consists of several modular technology steps and options. These are geared equally to the greatest-possible carbon reduction and actual feasibility, e.g. with regard to the respective political and legal framework, the availability of raw materials and feedstocks as well as green energies and related infrastructures.



### An overview of the key elements and milestones of the greentec steel climate protection program (2019 reference year for Scope 1 and 2)

- » **Through 2029:**  
**Reduction of carbon emissions by 30% in Phase 1**  
Investment in two renewable-energy-powered electric-arc furnaces in Linz and Donawitz and decommissioning of two coal-based blast furnaces.
- » **Between 2030 and 2035: CO<sub>2</sub> emissions expected to be reduced by 50% in Phase 2**  
Focus on direct CO<sub>2</sub> avoidance through further replacement of fossil hot metal production as well as expected complementary use of carbon capture and recovery techniques (carbon capture storage and utilization).

**By 2050 at the latest:**  
**Phase 3 with the objective of net zero carbon emissions**  
Focus on the replacement of the remaining fossil-fuel-produced crude iron capacities by utilizing fossil-free energies such as green hydrogen, bioenergies and CO<sub>2</sub> capture (CCUS) with the aim of maximum flexibility coupled with the economic feasibility of the net-zero strategy. The final decisions will be made at a later date in accordance with investment cycles and with conditions that can be foreseen.



## EU Emissions Trading/CO<sub>2</sub> Certificates

In the first half of the 2023/24 fiscal year, the certificate price in the EU emissions trading scheme was ranged generally between EUR 80 and EUR 90. As a result, however, the price weakened significantly and reached a low of around EUR 50 in February 2024 in the 2023/24 fiscal year. Throughout the entire reporting period, the certificate price fell 32.8% from EUR 89.24 as of 31 March 2023 to EUR 59.98 as of 31 March 2024.

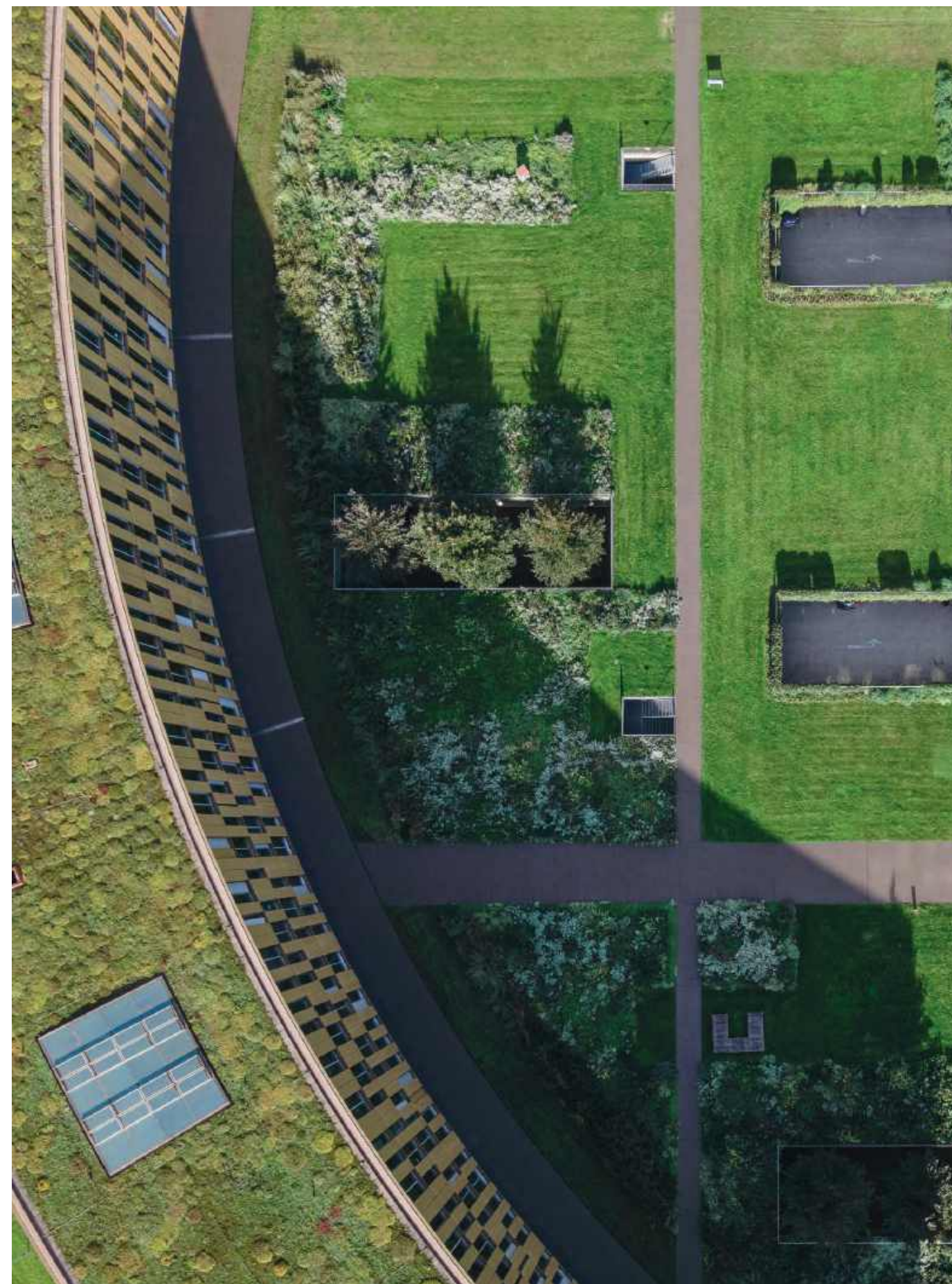
The number of emission certificates that the voestalpine Group must purchase is based on the total number of required emission certificates minus the allocated free certificates. In the 2023/24 financial year, this accounted for roughly one third of the total carbon emissions as compared to the average of previous years.

## Operational measures

Work on greentec steel has already begun in the Steel Division. Construction of the electric-arc furnace commenced in the past calendar year. Work on the new power supply system has already begun in the microtunnel, and a new conveyor belt bridge for the supply of raw materials has been installed. In addition to greentec steel, the division has also been focusing on expanding its own renewa-

ble energy production. In the past calendar year 2023, for example, an additional photovoltaic system with a capacity of nearly 1400 kWp was commissioned in the foundry.

A major focus was also on the CO<sub>2</sub>-reduced product portfolio. Since 2021, voestalpine has been offering all the flat steel and heavy plate products produced at the Linz site in a greentec steel Edition. Based on optimization measures in process management, such as in the use of scrap, reducing agents and renewable electricity, the carbon footprint of these products has been reduced by roughly 10%, which has saved approximately 400,000 tons of CO<sub>2</sub>e (CO<sub>2</sub> equivalent) along the entire value chain since the project began. Steel produced in this way is used not only by customers in the automotive industry, but now in building facades and technical building engineering, crane construction as well as in the heating and heat pump industries.







# EU LIGHTHOUSE PROJECT H2FUTURE GREEN HYDROGEN

In order to achieve the net-zero carbon target by 2050, voestalpine is researching several new processes and investing in new technology projects in steelmaking. This includes the H2FUTURE hydrogen pilot plant at the Linz site.

H2FUTURE is researching the industrial production of green hydrogen, which is hydrogen produced with renewable electricity and is to replace fossil fuels such as coal and coke in steelmaking in the long term.

voestalpine has set an international milestone in the development of new energy supply options with the world's largest pilot plant based on PEM (proton exchange membrane) electrolysis technology for the carbon-free production of hydrogen. With a capacity of 1,200 m<sup>3</sup>/hour and the provision of grid-related services, the test facility has

successfully completed various test programs since its launch in the autumn of 2019. Now it is necessary to further develop the plant with regard to purity and pressure of the generated hydrogen in order to make it available to a wide variety of applications.

# 2023/24 ENVIRONMENTAL PROGRAM

## IMPLEMENTED MEASURES

In addition to the greentec steel program set forth in the section entitled Climate Protection, further important environmental measures are presented here that contribute to improvement in environmental performance.

The following tables document measures implemented in previous programs as well as objectives newly defined in the current environmental program. Many additional individual measures have been developed and implemented in the respective companies.

Company	Target	Task	Figure
voestalpine Stahl GmbH	Reduced energy consumption in the scrap cutting facility	Conversion to a new filter type	Consumption of electricity reduced by roughly 200 MWh/year  RESULT: Electrical consumption reduced by 208.6 MWh/year
voestalpine Stahl GmbH	Increased utilization of resources in the coarse dust briquetting process in the steelmaking plant	Increased use of briquettes with increased coarse dust content in the converters (higher iron and lime content in the briquettes)	Use of briquettes between 4.5 kg/t RSt and 6.5 kg/t RSt  RESULT: Increased use of briquettes to 6.0 – 6.9 (2023 CY) kg/t RST has been achieved to date
voestalpine Stahl GmbH	Optimization of energy cycles in feed water and district heating	Heat recovery for district heating supply through the cooling of feed water	Energy consumption reduced by roughly 4,000 MWh/year for steam and by roughly 280,000 cubic meters/year for process water  RESULT: Industrial steam reduced by 3,420 MWh/year, mixed steam by 217 tons/year, and industrial water by 288,000 cubic meters/year
Steyrling location	Reduction of power consumption through optimization of continuous conveyors	The interlinked conveyor belt systems in mining logistics are optimized by intelligent automation and are stored without material in idle operation.	Power consumption reduced by 54 MWh by reducing operating hours  RESULT: Electrical consumption reduced by 74 MWh/year
voestalpine Grobblech GmbH	Optimized energy consumption in heating units	Replaced recuperator in pusher-type furnace 2	Natural gas consumption reduced by roughly 1,100 MWh/year and CO <sub>2</sub> by roughly 390 tons/year  RESULT: Reduced by 1,100 MWh and CO <sub>2</sub> reduced by 218 tons/year
voestalpine Giesserei Linz GmbH	Reduction of sandblasting media and specific energy consumption	Optimization of processes and production systems using software-supported production monitoring	Reduction of sandblasting media by 10%/year and specific energy consumption by 10%/year  RESULT: Sandblasted material reduced by 13.3 kWh/t to 9.2 kWh/t and specific energy consumption by 12%. Reduction of sandblasting media not pursued any further for processing and economical reasons
voestalpine Giesserei Linz GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 1,400 kWp photovoltaic system on the building roofs of the foundry	Generation of roughly 1,300 MWh of green electricity in the foundry  RESULT FY23/24: A total of 56.7 MWh were generated. Startup in February 2024
voestalpine Giesserei Linz GmbH	Reduction of specific water consumption	Project for the optimization of cooling water consumption	Reduction of specific water consumption (less than 420 m <sup>3</sup> /t)  RESULT: Specific water consumption reduced to below 420 m <sup>3</sup> /t
voestalpine Giesserei Traisen GmbH & Co KG	Reduction of energy input in ladle preheating systems	Use of natural gas/oxygen burners to preheat the ladle and reduce heat dissipation through an adapted ladle cover	Natural gas consumption reduced by roughly 1,615 MWh/year and electrical consumption by roughly 450 MWh/year  RESULT: Natural gas reduced by 1307.8 MWh and electricity by 451.2 MWh/year

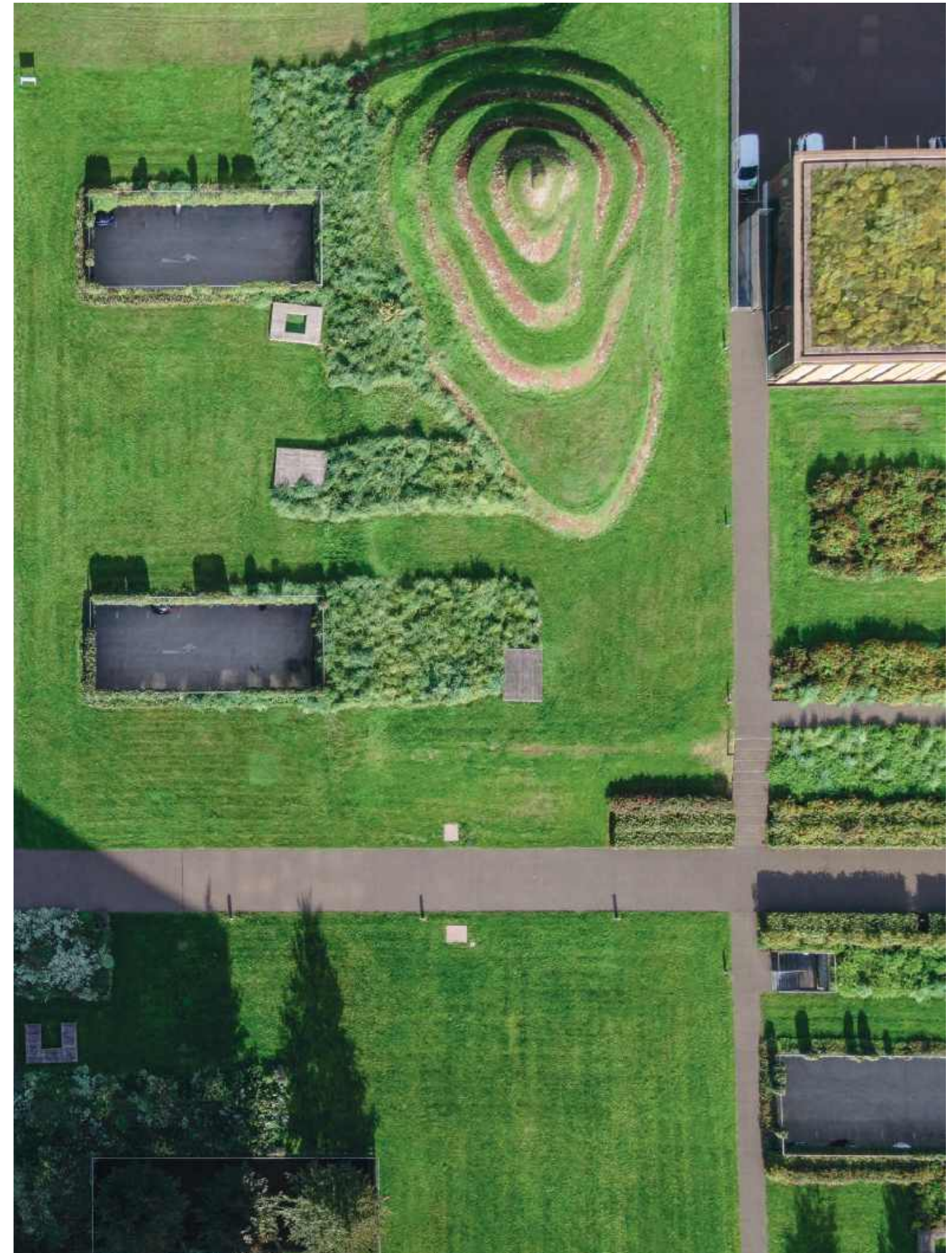
Company	Target	Task	Figure
voestalpine Giesserei Traisen GmbH & Co KG	Reduced energy consumption in the heat treatment system	Partial substitution of natural gas with oxygen and optimization of production systems	Natural gas reduced by roughly 3,000 MWh/year  RESULT: Natural gas reduced by 3,000 MWh/year
voestalpine Giesserei Traisen GmbH & Co KG	Use of process waste heat in the compressor house	Integration of compressor waste heat into the district heating network in Traisen for the use of thermal energy by residents and the city of Traisen	Energy consumption reduced in the region by an average of 100 kW of heat output  RESULT: Heat output reduced by 28 kW. In operation since January 2024. The desired feed volume of 100 kW has not been achieved because of technical difficulties that must be worked out by the two partners to the agreement. The compressor manufacturer and district heating operator are working on optimization
voestalpine Giesserei Traisen GmbH & Co KG	Reduction of material use	Re-use of flame-cut removal of high-alloyed materials	Material purchases reduced by roughly 30 t/year  RESULT: Material purchases reduced by 30.9 t/year.
voestalpine Steel & Service Center GmbH	Energy consumption reduced in the slitting line, Section 2	New insulation of production building roofs	Natural gas reduced by roughly 3% = 160 MWh/year  RESULT: Steam reduced by 478 MWh/year and natural gas reduced by 710 MWh/year. Total: 1,188 MWh/year.
voestalpine Steel & Service Center GmbH	Reduction of electricity consumption in production facilities, Part 1 of the 5-part step plan	Conversion of metal halide lamps to LED technology in the SSC production facilities	Consumption of propane gas reduced by roughly 100 MWh/year  RESULT: Electrical consumption reduced by 40 MWh/year
voestalpine Steel & Service Center GmbH	Reduction of energy input in the slitting section (LTA) 1	The main hydraulics of the LTA 1 can be switched off completely during standstills now that a smaller hydraulic unit has been installed to supply the turnstile and turntable area independently of LTA 1 and LTA 11	Consumption of propane gas reduced by roughly 719 MWh/year  RESULT: Electrical consumption reduced by 719 MWh/year
voestalpine Camtec GmbH	Increased material yield and resource efficiency in the production of ALZEN® slabs	Optimization of milling/rolling processing	Material yield increased by 8% per ton of utilized material  RESULT: Material output per ton increased by 8.56%
Logistik Service GmbH	Reduction of diesel fuel consumption on the works railway	Procurement of one new diesel locomotive with start-stop technology (1004.08 series)	Diesel reduced by roughly 800 liters/year per locomotive  RESULT: Diesel reduced by 5,200 liters/year
Cargo Service GmbH	Reduction of diesel fuel	Use of electric traction units instead of diesel traction units in container transport in the Linz harbor	Diesel fuel reduced by roughly 60,000 liters/year  RESULT: Diesel reduced by 45,000 liters/year



# 2023/24 ENVIRONMENTAL PROGRAM

## IMPLEMENTED MEASURES

Company	Target	Task	Figure
voestalpine Automotive Components Linz	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Works 1 Installation of a 1.8 MWp photovoltaic system on the building roofs of Works 1	Generation of roughly 1.7 GWh of green electricity in Work 1  RESULT: 607 MWh generated (since startup that lasted from September 2023 to March 2024)
voestalpine Automotive Components Linz	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Works 2 Installation of a 750 kWp photovoltaic system on the building roofs of Works 2	Generation of roughly 707 MWh of green electricity in the Works 2  RESULT: 344 MWh generated (since startup that lasted from September 2023 to March 2024)
voestalpine Automotive Components Linz	Reduction of energy use in Works 1 and 2	Cycle control in production facilities, including remote control of heating system	Electricity reduced by roughly 110 kWh/year  RESULT: 110 MWh was saved in the past fiscal year
voestalpine Automotive Components Linz	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity by purchase	Reduced purchases of gray electricity through the purchase of green electricity	Purchase of roughly 2 GWh of green electricity  RESULT: Purchase of 2 GWh of green electricity





# O76 COKE PLANT REMEDIATION PROJECT IN LINZ

Toward the end of the Second World War, all facilities in the area of the former coke plant site were severely damaged during bombing raids. Highly toxic substances such as tar, benzene and washing oils leaked into the soil and, in many cases, further into the groundwater.

The cocktail of pollutants that penetrated at the time, especially PAHs (polycyclic aromatic hydrocarbons), BTEX (benzene, toluene, ethylbenzene and xylene) and hydrocarbons, has since polluted the soil and groundwater in a wide variety of concentrations.

Between 2003 and 2008, Umweltbundesamt GmbH conducted numerous studies to determine the extent of the damage. It was determined that the abandoned site posed a significant threat to the environment. The Umweltbundesamt GmbH therefore proposed Priority Class 1 (the highest of three classes) for the contaminated site with a size of roughly 350,000 m<sup>2</sup>.

Extensive and costly measures were necessary to sustainably remediate and contain the damage to the environment. A detailed study of the various options, taking into account ecological and economic criteria, revealed that the best option was a combination of different remediation methods.

The first measures were implemented in 2012. Meanwhile the construction measures and hot-spot clearing of the

unsaturated soil zone have been completed. The so-called funnel-and-gate system for remediation measures will have to continue yet for a longer period of time. The contaminated site was designated as secured in the spring of 2023 by the Austrian Environment Ministry.

## The following measures have been taken:

### » Funnel-and-gate system

A sealing wall of approximately 1.6 km in length (funnel) with twelve reactive filter elements (gates) are in place to protect against groundwater outflow.

### » Clearing/floor washing

Roughly 850,000 tons of excavated material have been moved, and nearly 1,800 tons of contaminants (PAH) have been removed from the soil.

### » Soil vapor extraction

Pollutant concentrations (BTEX) were reduced by up to 30,000 mg/m<sup>3</sup> to an average of < 50 mg/m<sup>3</sup>

### » Phase separation

Pollutant concentration (BTEX and PAH) in the extracted groundwater reduced by > 99.9%





# 2024/25 ENVIRONMENTAL PROGRAM

## NEW MEASURES

Company	Target	Task	Figure	Deadline
voestalpine Stahl GmbH	Reduced energy consumption in the coking plant	Conversion of heating from coke battery 8 to coke gas underfiring	Reduced consumption of natural gas by roughly 6,000 MWh/year	2025
voestalpine Stahl GmbH	Conversion of lighting to LED spotlights in Slab Processing North, reduction of power consumption (high lighting)	Replace entire high lighting system with efficient LED technology	Electricity consumption reduced by roughly 300 MWh/year	2025
voestalpine Stahl GmbH	Conversion of lighting to LED spotlights in Slab Processing South, reduction of power consumption (high lighting)	Replace entire high lighting system with efficient LED technology	Electricity consumption reduced by roughly 200 MWh/year	2025
voestalpine Stahl GmbH	Increase in intrinsic power supply	Optimization of metallurgical gas supply during relining of Blast Furnace 6	Electricity purchases reduced by 9,500 MWh/year	2025
voestalpine Stahl GmbH	Reduction in storm water discharged into the sewer system and increase in amount of underground water in the area of the electric steelmaking plant	Construction of seepage shafts and seepage wells for seepage of rainwater	Precipitation from an area of roughly 2.5 ha is infiltrated into the subsoil and remains in the natural cycle (instead of precipitation water discharged into the sewer system)	2026
Steyrling location	Reduction of heat consumption in heating system in production facility	The old windows of the production facility will all be replaced during the refurbishment	Heat consumption reduced by roughly 7,750 MWh/year	2025
voestalpine Grobblech GmbH	Reduction of pollutants in purified wastewater	Construction of a new wastewater treatment plant for heavy plate production	Filterable substances reduced to 30 mg/liter, KW index to 4 mg/l, chromium to 0.1 mg/liter and nickel to 0.2 mg/liter	2028
voestalpine Giesserei Linz GmbH	Reduced sand in disposed waste	Reduced sand in forming process	Filling sand reduced by roughly 1,900 tons/year	2025
voestalpine Giesserei Linz GmbH	Reduction of energy consumption	New heating, cooling and air purification systems in Quality Control	Natural gas reduced by roughly 290 MWh/year and fuel oil by roughly 1,500 liters/year	2025
voestalpine Giesserei Linz GmbH	Reduced electricity consumption	Conversion to LED lighting in the model joinery	Consumption of electricity reduced by roughly 40 MWh/year	2025
voestalpine Giesserei Traisen GmbH & Co KG	Reduced electricity consumption	Successive conversion to LED lighting as replacement for defective lights	Electricity consumption reduced by roughly 19,000 MWh/year	2025
voestalpine Giesserei Traisen GmbH & Co KG	Determination of new ways of recycling refractory material	Recycling of refractory breakout material by separating and forwarding to recycling firms	Recycling of roughly 400 t/year of refractory breakout material	2025
voestalpine Steel & Service Center GmbH	Reduction of electricity consumption in production facilities, Part 2 of the 5-part step plan	Conversion of metal halide lamps to LED technology in the SSC production facilities (shape cutting and cut-to-length facilities)	Consumption of propane gas reduced by roughly 250 MWh/year	2025
voestalpine Steel & Service Center GmbH	Reduction of natural gas consumption for heating purposes	Industriezeile Halle1 Gate 1.2 Accelerated closure and plastic curtain insulation of Gate 1.1	Natural gas consumption reduced by roughly 300 MWh/year	2025
voestalpine Steel & Service Center GmbH	Compressed air reduced in slitting line	Measures to reduce piping and hose leakage through systematic elimination of holes, replacement of service positions, automatic controllers and oilers	Compressed air reduced by 2,540 thousand cubic meters/year	2025
voestalpine Camtec GmbH	Increased resource efficiency in the production of ALZEN® slabs	Optimization of new casting mold	Scrap yield reduced by 4.5% per ton of utilized material	2025

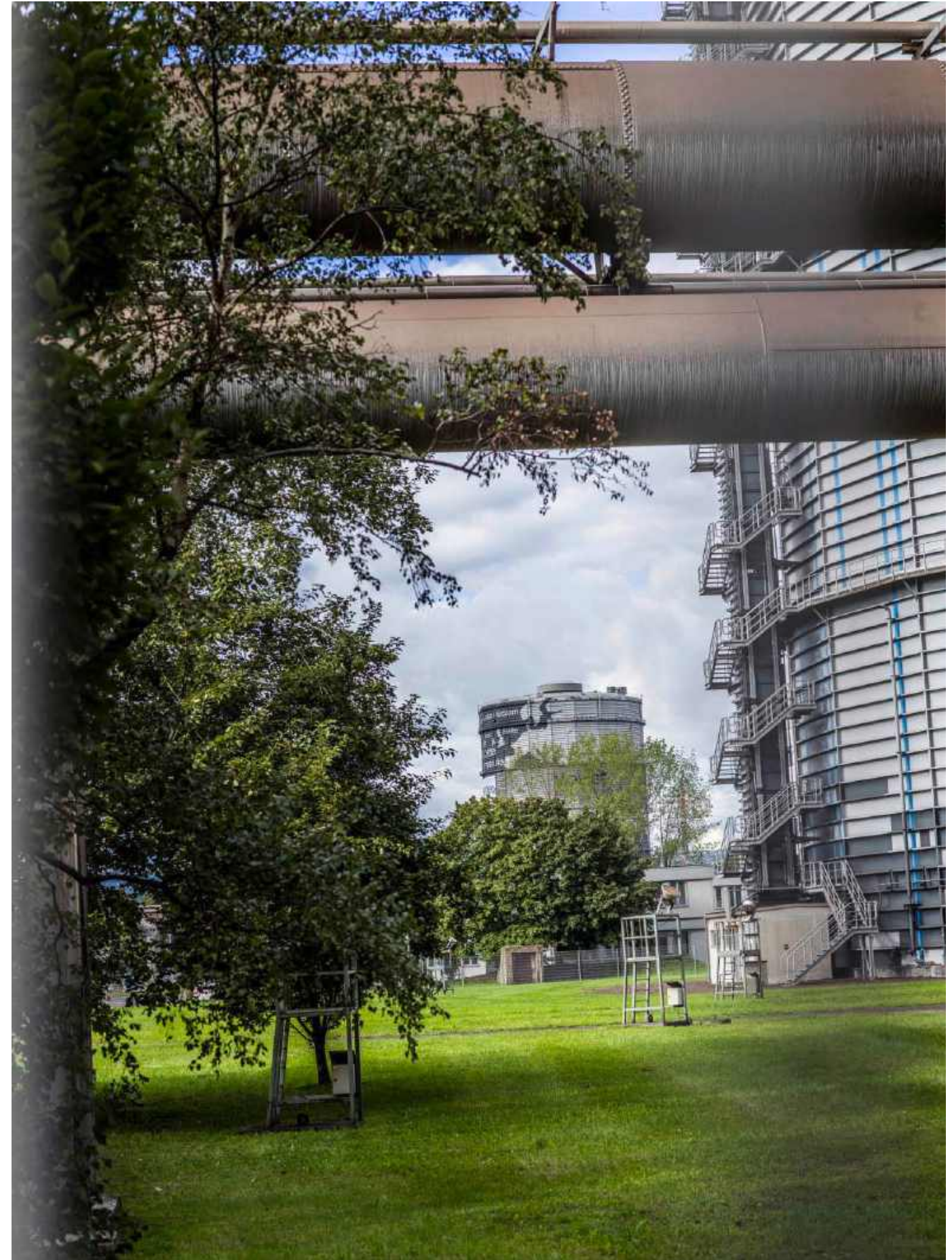




# 2024/25 ENVIRONMENTAL PROGRAM

## NEW MEASURES

Company	Target	Task	Figure	Deadline
Logistik Service GmbH	Reduction of diesel fuel consumption on the works railway	Procurement of one new diesel locomotive with start-stop technology (1004.09 series)	Diesel reduced by roughly 800 liters/year per locomotive	2025
Cargo Service GmbH	Reduction of diesel fuel	Use of electric traction units instead of two diesel traction units on the Nuremberg shuttle line between Linz shunting yard West and from ECO-Plus Ennsdorf (scrap transport)	Diesel fuel reduced by roughly 10,000 liters/year	2025
voestalpine Standortservice GmbH	Fuel reduction	Additional replacement of two emergency vehicles powered by internal combustion engines with two powered by electric motors	Light petroleum distillate reduced by roughly 4,000 liters/year	2025
voestalpine Standortservice GmbH	Pollutant emissions reduced in emergency vehicles	Upgrade of rescue fire-fighting vehicle used by the works fire department to higher exhaust standard	Conversion from Euro 4 to Euro 6	2025
voestalpine Automotive Components Linz	OPERATIONALIZATION OF DECARBONIZATION STRATEGY Transition to sustainable heating technology	Installation of heat exchangers in the cooling channel and heat recovery with 2 heat pumps	Natural gas reduced by roughly 2,400 MWh/year and CO <sub>2</sub> by roughly 550 tons/year (with simultaneous increase in purchased green electricity)	2024
voestalpine Automotive Components Linz	OPERATIONALIZATION OF DECARBONIZATION STRATEGY Increased share of green electricity by purchase	Reduced purchases of gray electricity through the purchase of green electricity	Purchase of roughly 2 GWh of green electricity	2025





# 2023/24 ENVIRONMENTAL PROGRAM MEASURES BEING IMPLEMENTED

Company	Target	Task	Figure	Deadline
voestalpine Stahl GmbH	Reduced energy consumption in the coal injection system	Technical improvements in nitrogen supply systems	Reduced consumption of natural gas by roughly 3,000 MWh/year	2025 Extension
voestalpine Stahl GmbH	Reduction of diffuse dust emissions in the finishing line of the wide-strip mill	Installation/extension of the dust extraction system between finishing stands 2 and 3	Dust reduced by roughly 30 tons/year	2025 Being implemented
voestalpine Stahl GmbH	Reduction of filter cartridges in wastewater treatment in hot-dip galvanizing and annealing lines	Installation of cleaning system with flow rate measurement	Filter tubes reduced by roughly 270 units/year	2025 Extension
voestalpine Stahl GmbH	Reduction of energy consumption by switching to LED technology for high-level lighting in the conveyor area	Installation of LED technology at Pusher-type Furnace 7, in the Z1 bay (hot-rolled strip), Pickling Facility 2, the electrogalvanizing line and HDG 2	Electricity reduced by roughly 2,650 MWh/year	2025 Extension
voestalpine Stahl GmbH	Reduction of energy input in blast furnace gas enrichment	Mixed Gas Station 5/6, selective improvement of blast furnace gas by means of converter gas	Natural gas reduced by 1,195 MWh/year	2024 Extension
voestalpine Stahl GmbH	Optimization of utilization of converter gas from the steelmaking plant	Converter gas utilization increased by means of fast CO analysis	Avoidance of additional consumption of 7,700 MWh of natural gas, roughly 1,500 tons of CO <sub>2</sub> /year and electricity by 2,800 MWh/year	2024 Extension
voestalpine Stahl GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 1,500 kWp photovoltaic system on the ILL building roof	Generation of roughly 1,400 MWh of green electricity	2025 Extension
voestalpine Stahl GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 50 kWp photovoltaic system on Office Building 75	Generation of roughly 47 MWh of green electricity	2024 Extension
voestalpine Stahl GmbH	Operationalization of the decarbonization strategy Increased share of green electricity through in-house generation	Installation of a 50 kWp photovoltaic system on the testing center	Generation of roughly 47 MWh of green electricity	2025 Extension
voestalpine Stahl GmbH	Reduction of precipitation discharge into the public sewage system by means of seepage of roof water in the area of the new Block 08 power generation plant (channeled into natural circulation)	New construction of seepage shafts for seepage of roof water	1,655 m <sup>2</sup> roof area with seepage into subsurface	2026 Being implemented
voestalpine Stahl GmbH	Reduction of storm water discharged into the sewer system and increased amount of subsurface water in the area of new development	New construction of steelmaking facility east of Office Building 28 with seepage shafts for seepage of roof water and seepage swales for seepage of road surface water	Precipitation from an area of roughly 2,800 m <sup>2</sup> is infiltrated into the subsoil and remains in the natural cycle (instead of precipitation water discharged into the sewer system)	2024 Extension
voestalpine Stahl GmbH	Reduced use of cooling water at the Linz location during the summer months as part of an experimental program	Optimized utilization of the temperature range between the Danube water inlet and the cooling water outlet in selected water lines	Result in final report on cooling water reduction in cubic meters/year	2024 Extension
voestalpine Stahl GmbH	Reduction of precipitation discharge into sewage system and increase in underground water quantity by 10,100 cubic meters/year (introduced into natural water cycle)	Beta 3 project: Throughout the project, roof water is no longer discharged into the sewer system, but into the subsoil	Installation of seepage system STATUS: Construction has been completed; government approvals in progress	2024 Extension
voestalpine Giesserei Linz GmbH	Reduced energy consumption in the heat treatment system	Conversion from natural gas/air to natural gas/oxygen combustion	Natural gas reduced by roughly 2,600 MWh/year	2024 Extension
voestalpine Giesserei Linz GmbH	Reduction of energy input in ladle preheating systems	Conversion from natural gas/air to natural gas/oxygen combustion and reduction of heat dissipation by means of an adapted ladle cover	Natural gas consumption reduced by roughly 750 MWh/year and electrical consumption by roughly 340 MWh/year	2024 Extension
voestalpine Giesserei Traisen GmbH & Co KG	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 640 kWp photovoltaic system on the building roofs of the foundry	Generation of roughly 600 MWh of green electricity in the foundry	2024 Extension

Company	Target	Task	Figure	Deadline
voestalpine Steel & Service Center GmbH	Reduced steam consumption	Installation of a central heating regulation system in the slitting facility	Steam consumption reduced by roughly 12% = 800 MWh/year	2025 Extension
voestalpine Standortservice GmbH	Pollutant emissions reduced in emergency vehicles	Replacement of three emergency vehicles powered by internal combustion engines with three powered by electric motors	Fuel consumption reduced by roughly 8000 l/year petrol	2025 Extension
voestalpine Standortservice GmbH	Pollutant emissions reduced in emergency vehicles	Replacement of three emergency vehicles powered by internal combustion engines with two powered by electric motors	Fuel savings of roughly 4,000 tons/year of petrol and roughly 5,000 liters/year of diesel	2025 Extension
voestalpine Automotive Components Linz	Reduction of energy consumption in Works 1	New control systems for compressors in selective switching on and off on non-working shifts	Electricity reduced by roughly 5,096 kWh/year	2025 Extension

# 2022/23 ENVIRONMENTAL PROGRAM MEASURES NOT IMPLEMENTED

Company	Target	Task	Figure
voestalpine Stahl GmbH	Reduction of clean water consumption in the steelmaking plant	Technical improvement and pressure reduction in pure water cooling of lances	High-purity water reduced by 570 Tm <sup>3</sup> per year of and electrical energy reduced by 470 MWh/year for pumping  RESULT: The measure was not implemented because of changes in general conditions



# PRODUCTION AND ENERGY FIGURES

The following production figures show the relevant environmental parameters for the companies included in this Environmental Report.

## Linz location

Production volume	Unit	2021 CY	2022 CY	2023 CY
Crude steel (CS)	Million tons	5.66	5.40	5.19

Products	Unit	2021 CY	2022 CY	2023 CY
Hot-rolled strip (non-slit)	Million tons	1.135	1.080	1.164
Cold-rolled strip and electrical steel		1.025	0.885	0.803
Galvanized strip		2.128	2.038	2.205
Organic-coated strip		0.192	0.174	0.151
Heavy plates		0.5	0.6	0.6
Blast furnace slag		1.3	1.2	1.2
Castings in Linz		4,777.0 <sup>1)</sup>	4,237	4,237
Camtec castings	tons	61	90	90.0
Laser-welded blanks		139,161 <sup>2)</sup>	125,471	125,471
Products processed by SSC	units	1,928,660	1,774,788	1,774,788

Energy	Unit	2021 CY	2022 CY	2023 CY
Natural gas	TWh	3.17	2.94	3.28
Electric power (outside source)	TWh	0.596	0.582	0.511

## Steyrling location

Products	Unit	2021 CY	2022 CY	2023 CY
Burned lime (BL)	Million tons	0.328	0.339	0.326
Armor stones		0.002	0.004	0.002
Fines (unburned)		0.646	0.696	0.579
Volume of limestone mined (LS)		1.214	1.341	1.145

Energy	Unit	2021 CY	2022 CY	2023 CY
Natural gas	GWh	321	333	320
Electric power		13	13	13

## Traisen location

Production volume	Unit	2021 CY	2022 CY	CY 2023
Cast parts	tons of castings	5,202 <sup>3)</sup>	4,564	4,333
Cast parts	units	25,279.0	21,671	17,763

<sup>1)</sup> Value was updated (reduced by 26 tons).

<sup>2)</sup> Values updated

<sup>3)</sup> Value was updated (increased by 165 tons). This results in minor changes in specific key figures (with reference to tons of castings) in core indicators at the Traisen location (see pages 32 and 33).



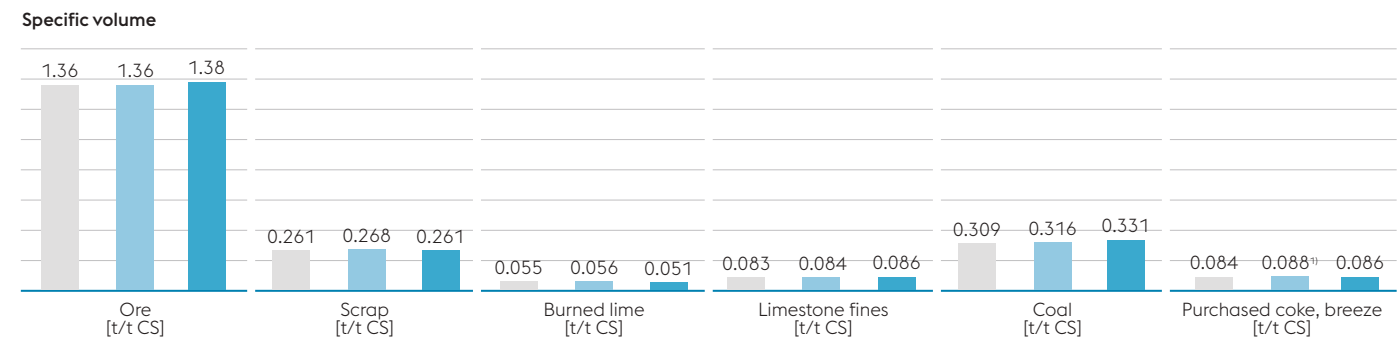
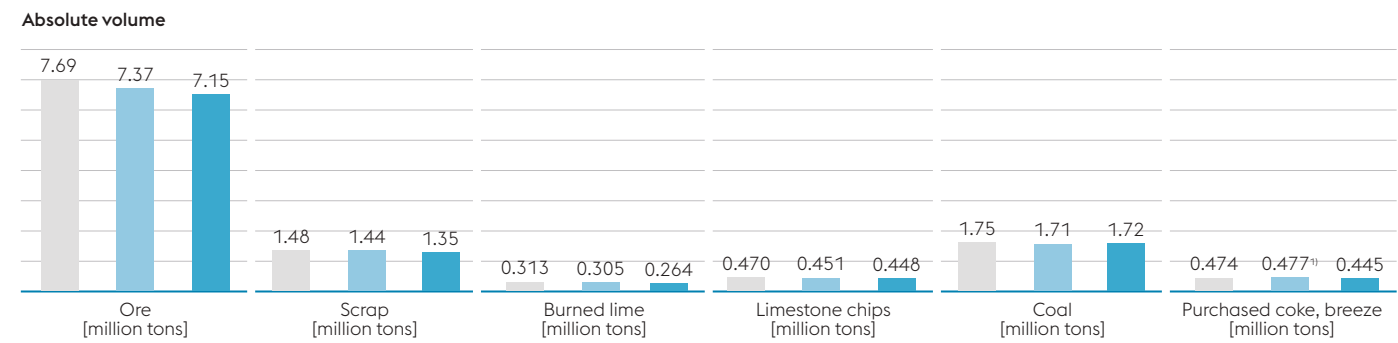


# CORE INDICATORS AT THE LINZ LOCATION

The core indicators relate to total annual crude steel production and amounted to 5.19 million tons in the 2023 calendar year (2022: 5.40 million tons, 2021: 5.66 million tons).

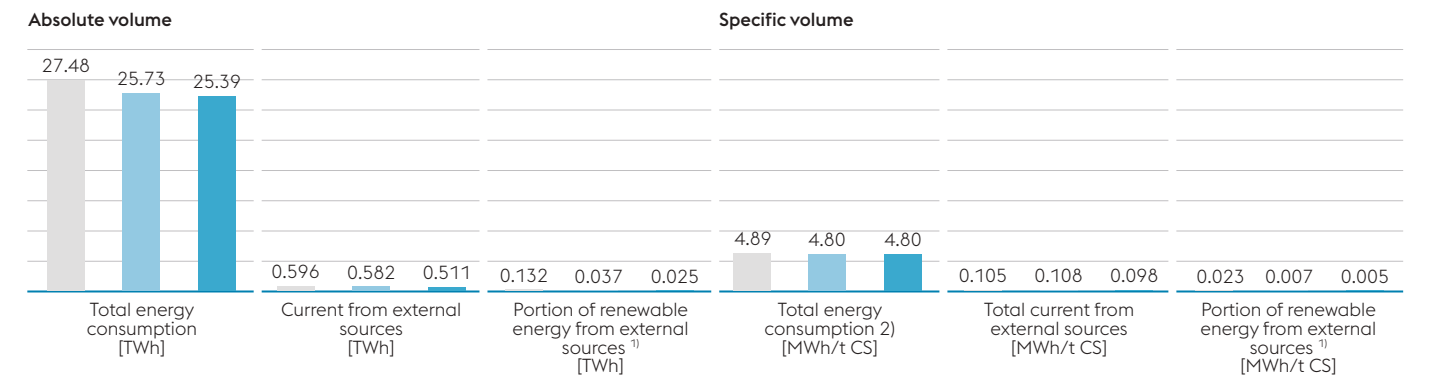
## MATERIAL EFFICIENCY

2021 2022 2023



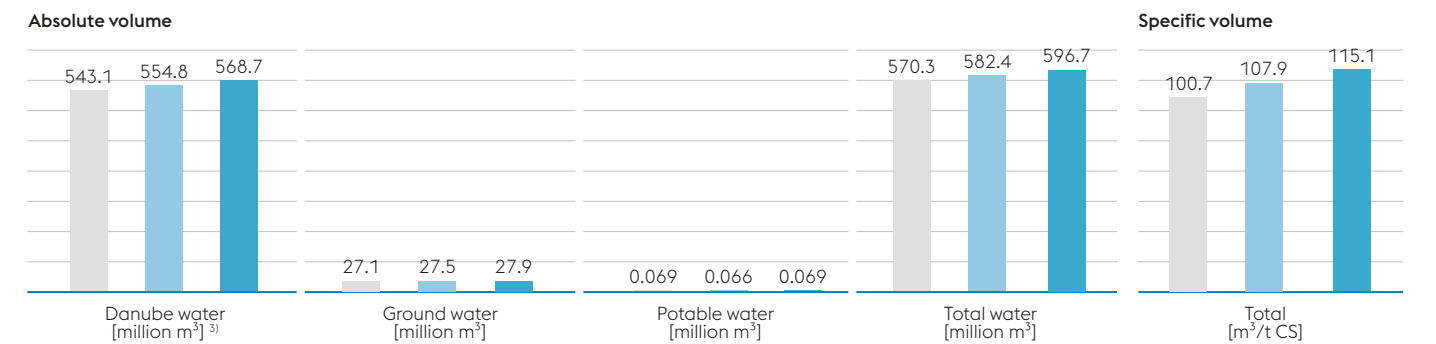
## ENERGY EFFICIENCY

2021 2022 2023



## WATER

2021 2022 2023



<sup>1)</sup> Values updated.

<sup>1)</sup> Assessment of proportion of renewable energies with respect to electricity labeling from purchased third-party electricity. The following percentages were recorded for the 2023 calendar year: wind energy (3.02%) and miscellaneous ecological energy (1.95%)

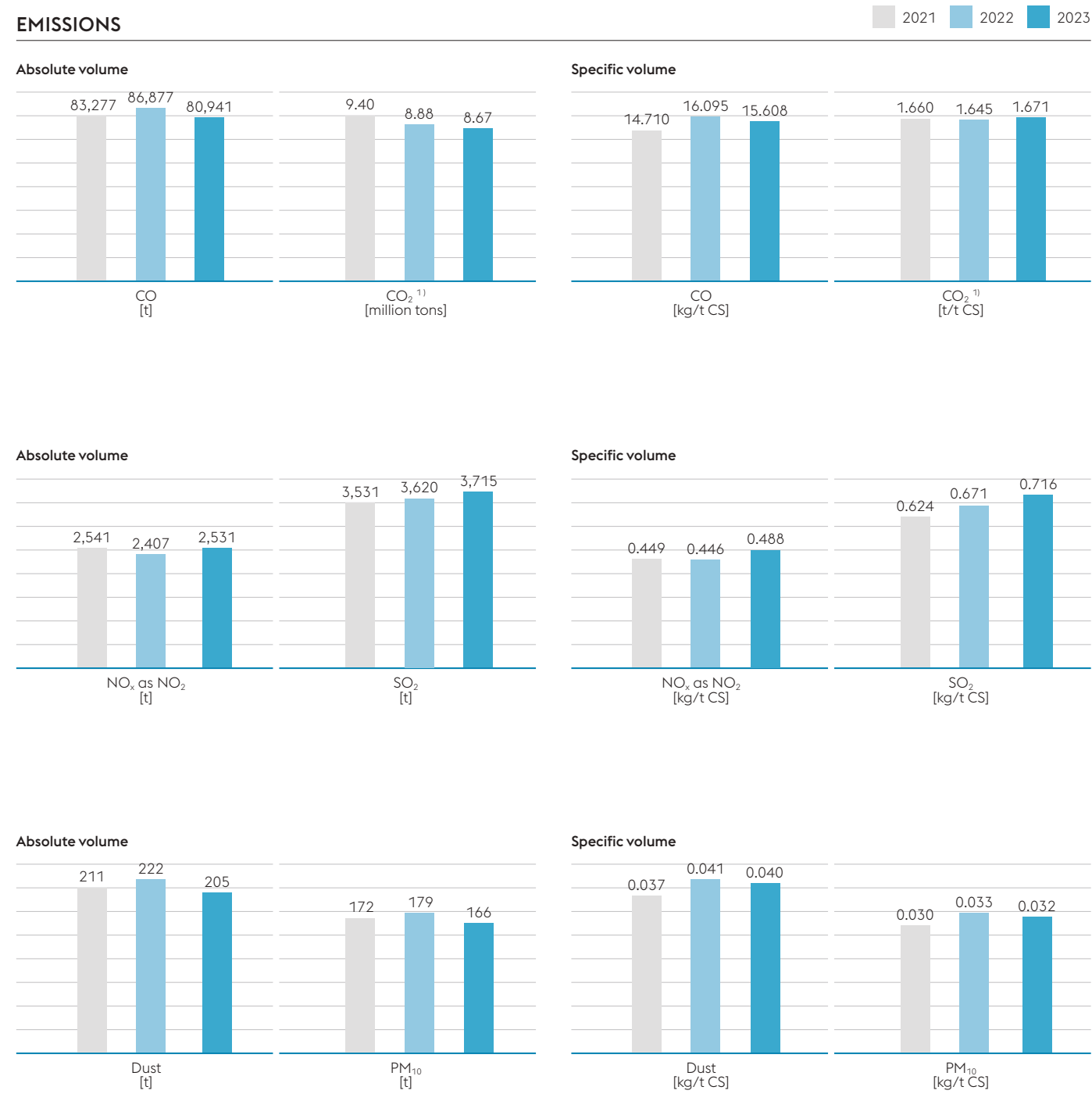
<sup>2)</sup> Including slab purchases

<sup>3)</sup> Limit value: 720 million m<sup>3</sup>/year



# CORE INDICATORS AT THE LINZ LOCATION

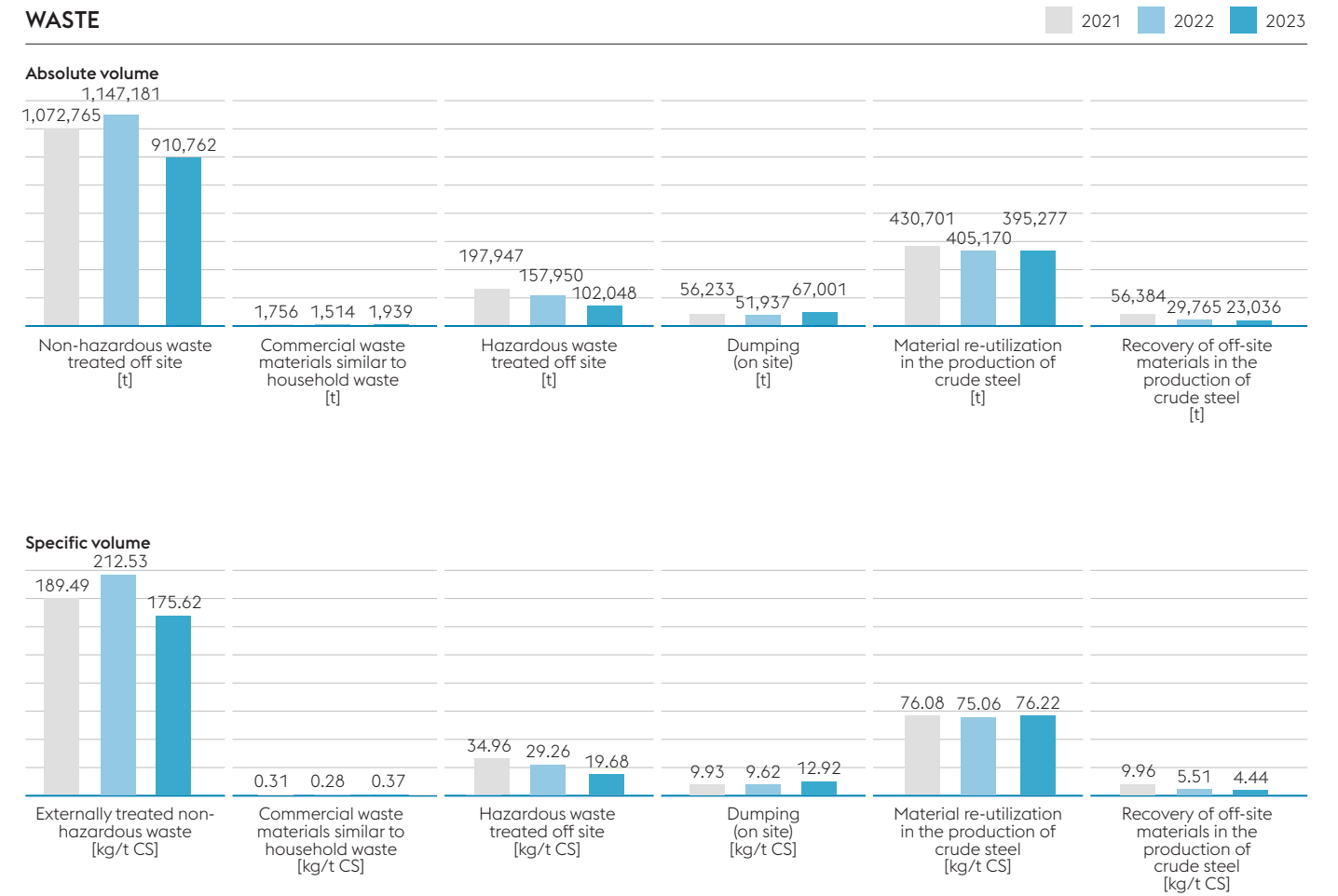
## EMISSIONS



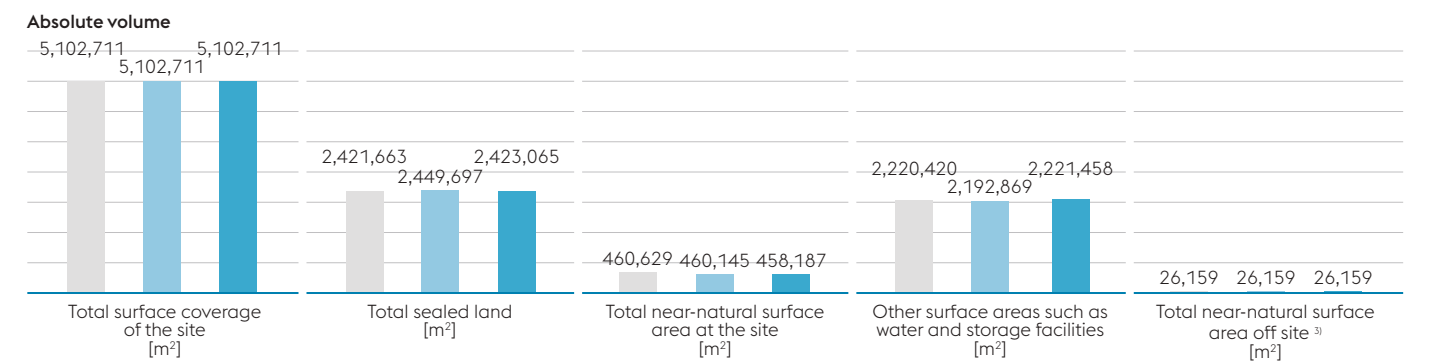
Other greenhouse gases such as methane and substances that deplete the ozone layer are emitted in only small amounts (roughly 220 tons of methane and 60 kg of substances that deplete the ozone layer).

<sup>1)</sup> Verified volume under EU emissions allowance trading, Attachment I (direct emissions)

## WASTE



## BIOLOGICAL DIVERSITY <sup>2)</sup>



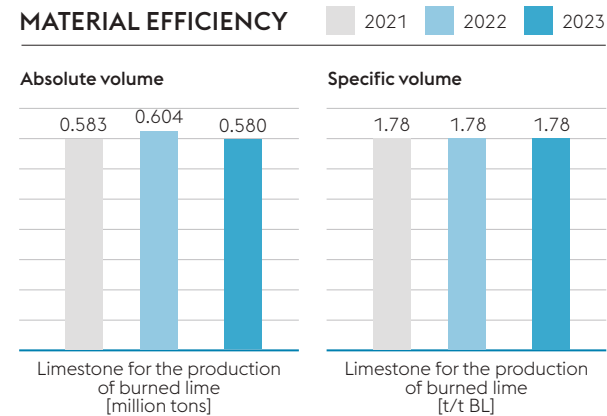
<sup>2)</sup> The core biological diversity indicator refers to the surface area of the works premises at the Linz location as registered in the land registry in April 2023 and is the actual value.

<sup>3)</sup> In the course of a more detailed digital assessment (GIS), additional areas outside core operations were included in the evaluation. As a result, the near-natural areas off site have increased, but there has been no change in property ownership.

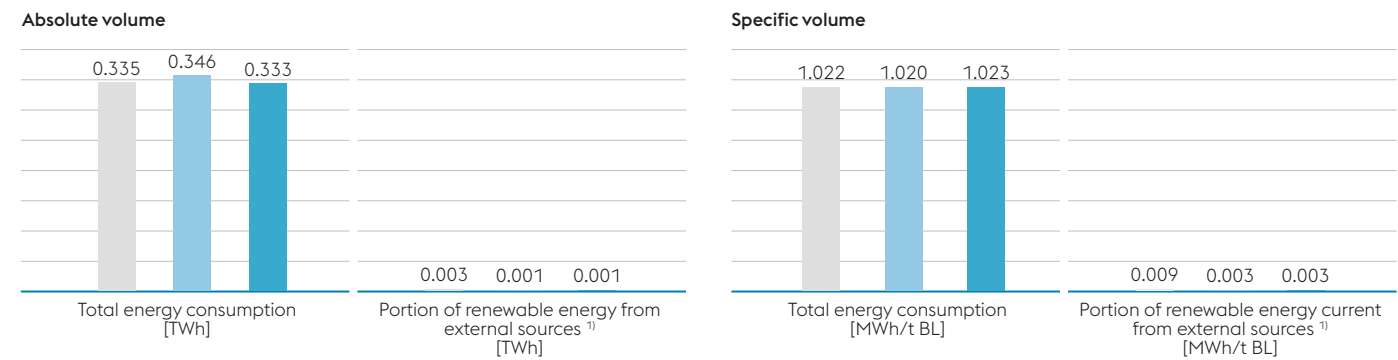


# CORE INDICATORS AT THE STEYRLING LOCATION

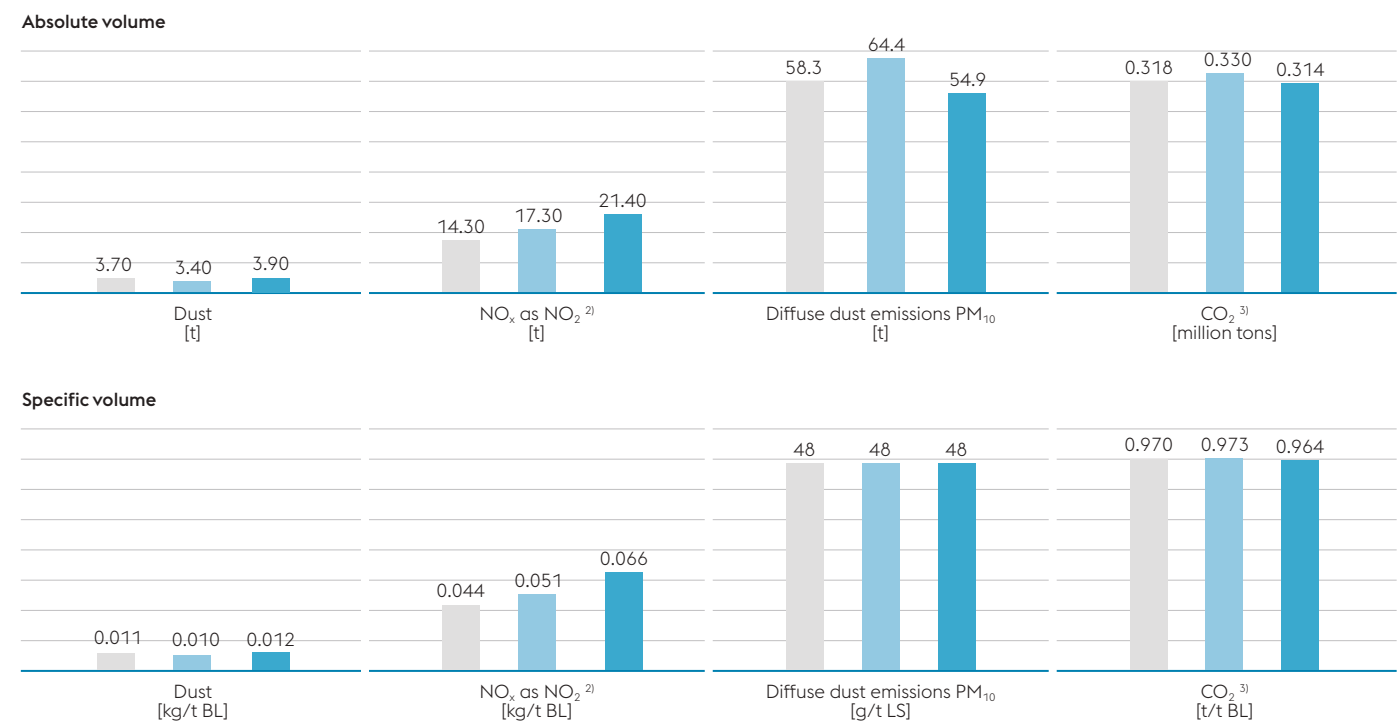
The core indicators refer to total annual burned lime production. In the 2023 calendar year, the value was 0.33 million tons. In 2022 it was 0.34 million tons, 2021: 0.33 million tons.



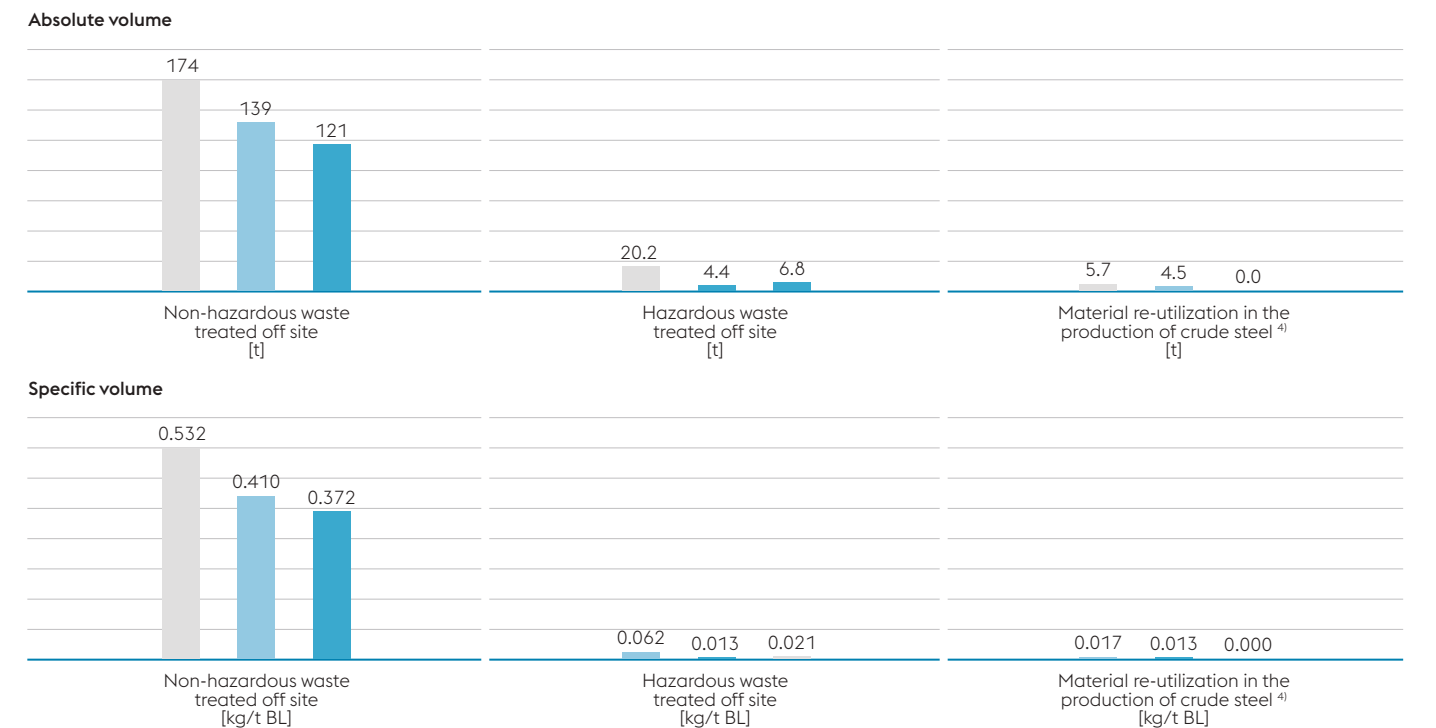
## ENERGY EFFICIENCY



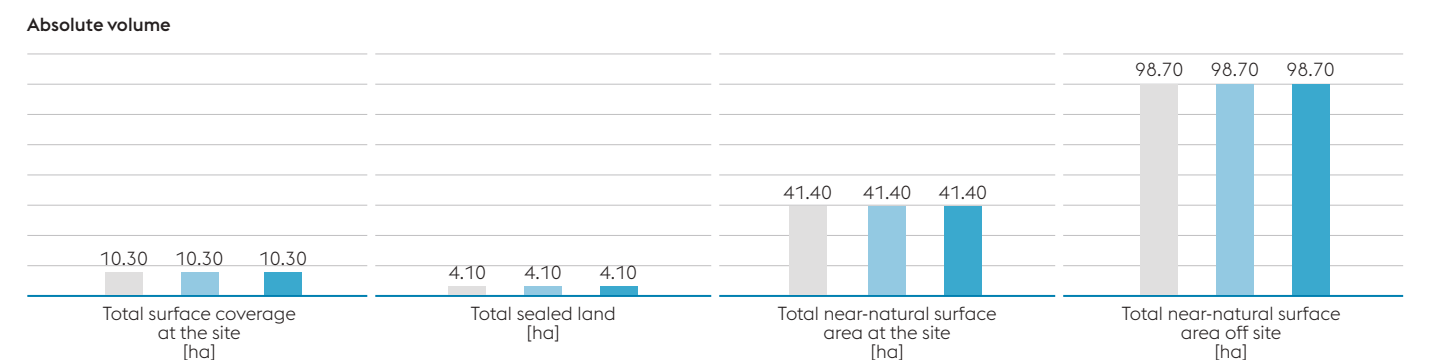
## EMISSIONS



## WASTE



## BIOLOGICAL DIVERSITY<sup>5)</sup>



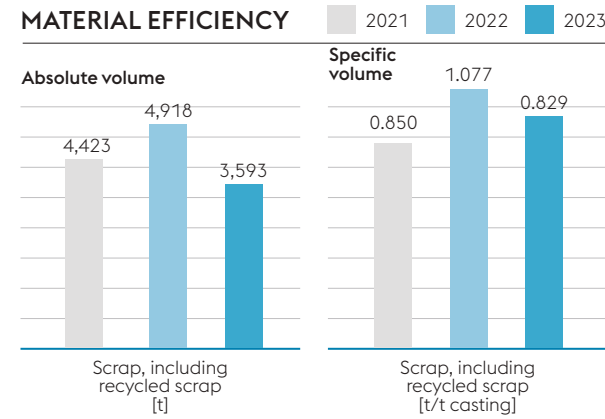
<sup>1)</sup> Assessment of proportion of renewable energies with respect to electricity labeling from purchased third-party electricity. The following percentages were recorded for the 2023 calendar year: wind energy (3.02%) and miscellaneous ecological energy (1.95%)  
<sup>2)</sup> Emissions from lime furnaces  
<sup>3)</sup> Verified volume under EU emissions allowance trading, Attachment I (direct emissions)

<sup>4)</sup> Material recycling at the Linz location  
<sup>5)</sup> The core biological diversity indicator refers to the surface of the works premises at the Steyrling location in the land registry in April 2023 and is the actual value.

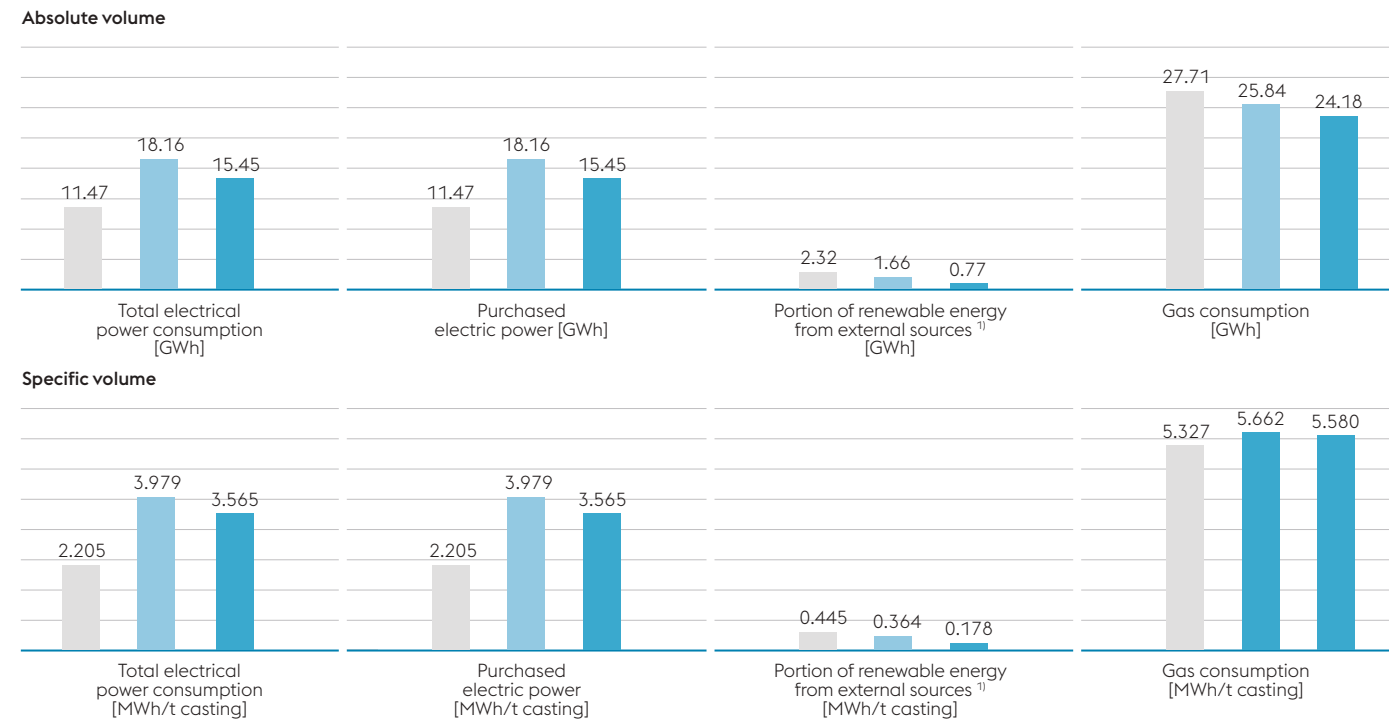


# CORE INDICATORS AT THE TRAISEN LOCATION

The core indicators refer to total annual casting production. In the 2023 calendar year, the volume was 4,333 tons. In 2022 it was 4,564 tons. In 2021 it was 5,202 tons.



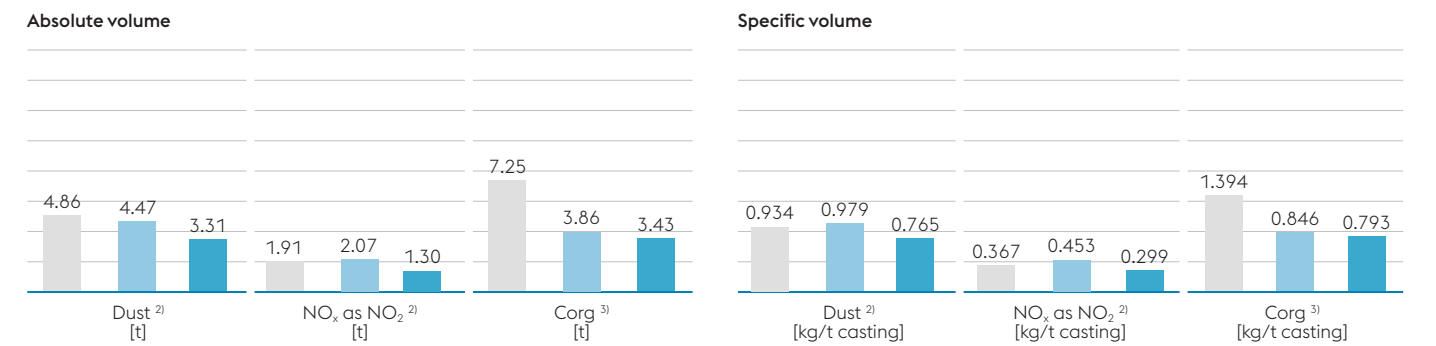
## ENERGY EFFICIENCY



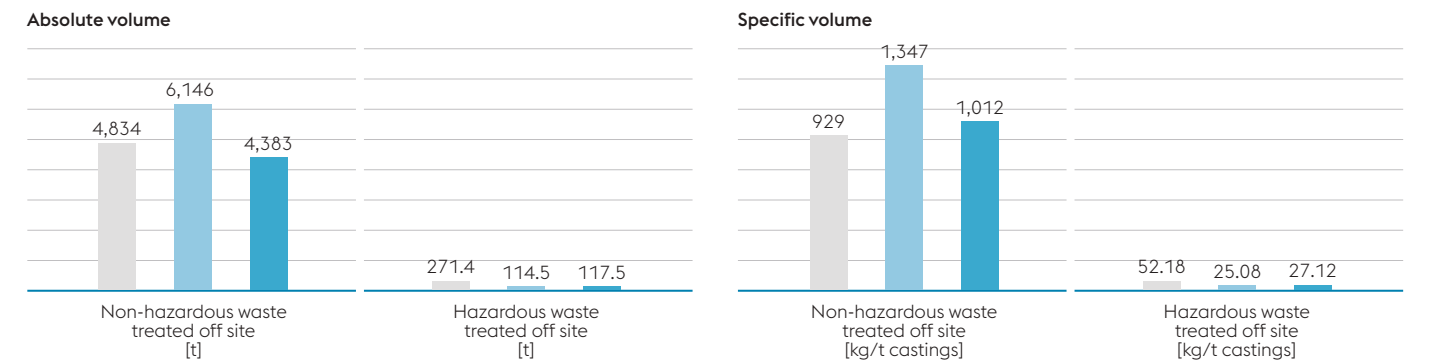
## WATER



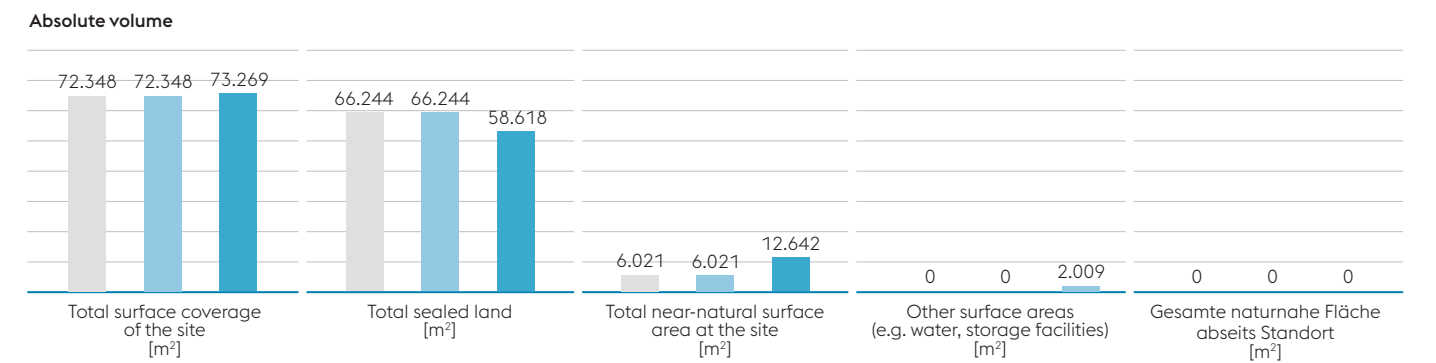
## EMISSIONS



## WASTE



## BIOLOGICAL DIVERSITY <sup>4)</sup>



<sup>1)</sup> Assessment of proportion of renewable energies with respect to electricity labeling from purchased third-party electricity. With respect to current from external sources, 90.84% was sourced from fossil fuels, while other renewable accounted for 9.16% in the 2023 calendar year.

<sup>2)</sup> Emissions from production systems

<sup>3)</sup> Emissions from the annealing furnace/bogie hearth furnace

<sup>4)</sup> The core biological diversity indicator refers to the surface of the works premises at the Traisen location in the land registry in April 2023 and is the actual value. In the course of a digital assessment (GIS) of the land boundaries and their utilization, all areas outside core operations were included in the evaluation. The near-natural areas of the Traisen site have risen sharply, but there have been no changes in property ownership.



# PRODUCT SUSTAINABILITY

The political and legal framework in Europe aims to transform the economic system toward a circular economy. Sustainability along the supply and value chains is of particular importance in this context.



The circular economy requires consideration of the entire value chain of products based on ecological, economic and social aspects across the entire lifecycle from raw materials through production, consumption and end of life, which in turn represents the beginning of a new lifecycle.

In many areas at voestalpine, the circular economy has long been implemented at the process and product level and is being developed continuously. Steel products are

inherently durable and contribute substantially to further development of the circular economy. Modern lightweight steels and manufacturing processes such as additive manufacturing and 3D sand printing make it possible to reduce the amount of product material. In the utilization phase, steel products can be repaired and reconditioned by means of various processes, thus extending their service life. The durability and longevity of steel products make it possible to reuse and recycle them over and over again.

At the end of their service life, they serve as secondary raw materials from which new high-quality steel products can be manufactured. The cycle is closed and can be repeated as often as required (multi-recycling of steel). Waste and recycled materials from our in-house steel production as well as waste and secondary raw materials from external production processes also make a significant contribution to the circular economy. The byproducts from steel production can in turn serve as secondary raw materials for the

manufacture of products in other sectors (industrial symbioses). For example, granulated blast furnace slag, which is a byproduct of steel production, is used in the cement industry as an additive. This conserves natural resources and reduces CO<sub>2</sub> emissions in cement production.

At voestalpine we always strive to promote the efficient use of alternative or secondary raw material sources through research and development. In determining product sustain-



nability, the focus at voestalpine is currently on ecological aspects, i.e. analysis of the environmental impact of products and their decarbonization. A central element and methodological tool in this context is lifecycle assessment (LCA). This requires uniform, robust and globally comparable methodologies that can help create an international level playing field and thereby promote sustainable economic growth.

Declarations (Environmental Product Declarations, EPDs) are an essential factor at voestalpine in the determination and communication of environmental impact of products based on lifecycle assessments. EPDs are based on the international standards EN 15804 and ISO 14025 and are audited and verified by independent agencies. The voestalpine Steel Division has listed and published environmental product declarations for various products (hot-rolled and cold-rolled steel strip, hot-dip galvanized steel strip, electrogalvanized steel strip, organic-coated steel strip, annealed and non-annealed electrical strip and heavy plates) as part of the declaration program of the Institut Bauen und Umwelt e.V. (IBU). EPDs for various other voestalpine products are currently being prepared.

Decarbonization of the steel industry is a key challenge for process and product development and is inextricably linked to the circular economy. In the conversion of technology to achieve largely CO<sub>2</sub>-free production, the aim is to ensure the consistently high quality of products and materials. The conversion of technology will also impact existing material cycles and industrial symbioses and require further or new development of circular economy approaches within and across sectors.

Regular dialog with various stakeholders on decarbonization and product sustainability along the supply and value chains help in continuously developing the concrete step-by-step voestalpine strategy for CO<sub>2</sub>-reduced and, in the long term, climate-neutral steel production.

The voestalpine Group is working intensively on deriving measurable targets from the existing transformation strategy in line with the latest climate science and is pursuing the objectives of the Science Based Targets Initiative.

As part of its comprehensive decarbonization strategy, the voestalpine Steel Division has already implemented short-term decarbonization measures as part of the CO<sub>2</sub> Reduced Steel project at the Linz site. The aim is to reduce direct CO<sub>2</sub> emissions in existing steelmaking processes. The environmental impact of products manufactured in this process, in particular carbon footprint, is determined and reported pursuant to lifecycle assessments based on internationally recognized methods and standards.

The voestalpine Group provides information on the environmental impact of its products in the form of environmental product declarations and, in the interest of transparency, also publishes data on greenhouse gas emissions and water consumption as part of the Carbon Disclosure Project (CDP). The voestalpine Group also participates in cross-sector initiatives such as ResponsibleSteel.





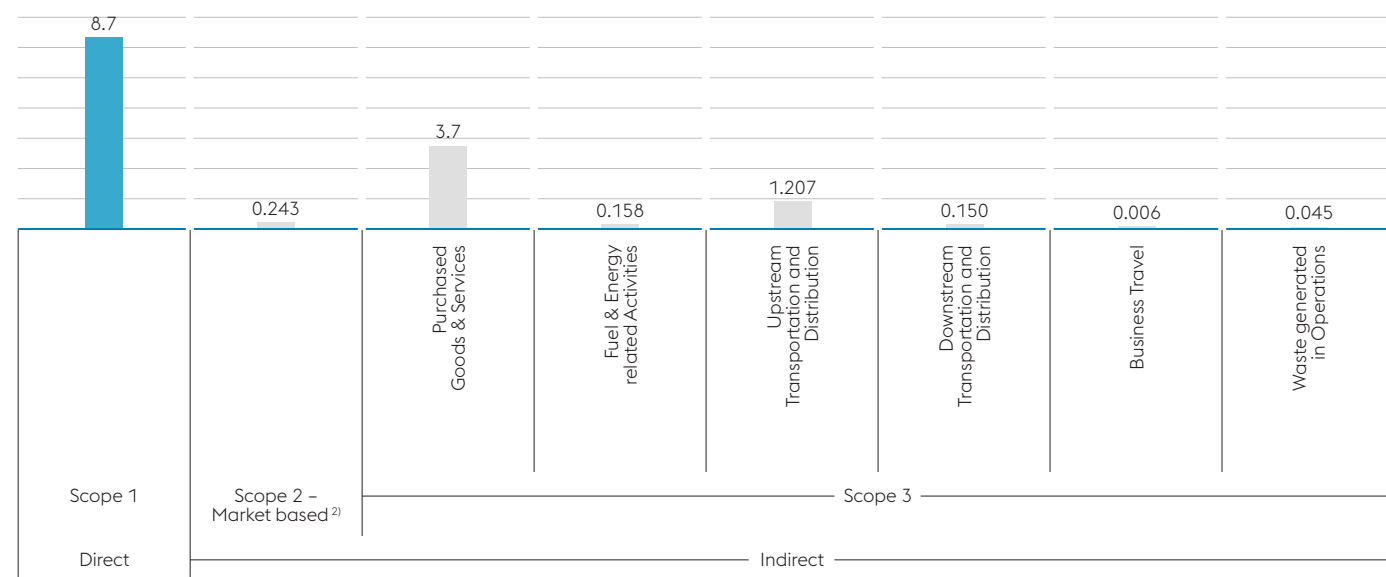
# DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS IN 2023

voestalpine attaches great importance to transparency and has been participating in the Carbon Disclosure Project (CDP) since 2017. The greenhouse gas emissions along the entire value chain have been calculated holistically for

all production sites pursuant to ISO 14064 and verified externally <sup>1)</sup>. The greenhouse gas emissions at the Linz, Steyrling and Traisen sites are as follows:

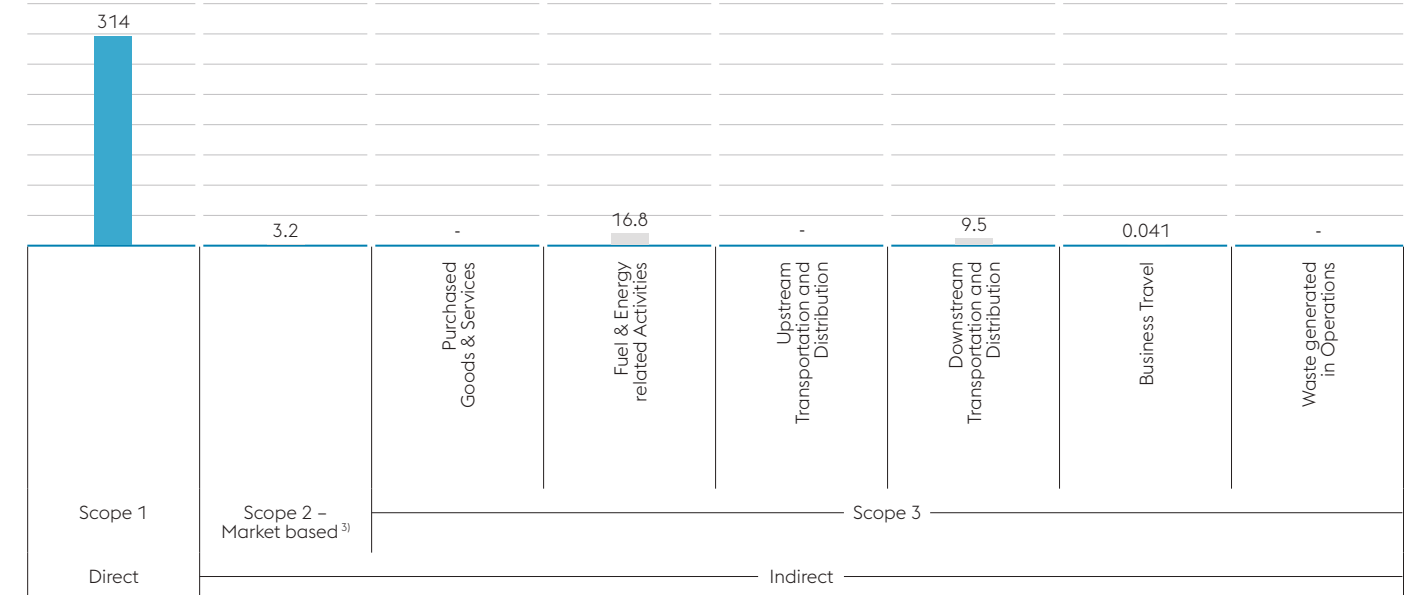
## DIRECT AND INDIRECT GHG EMISSIONS AT THE LINZ SITE

in [million tons CO<sub>2</sub>e] (CO<sub>2</sub> equivalent)



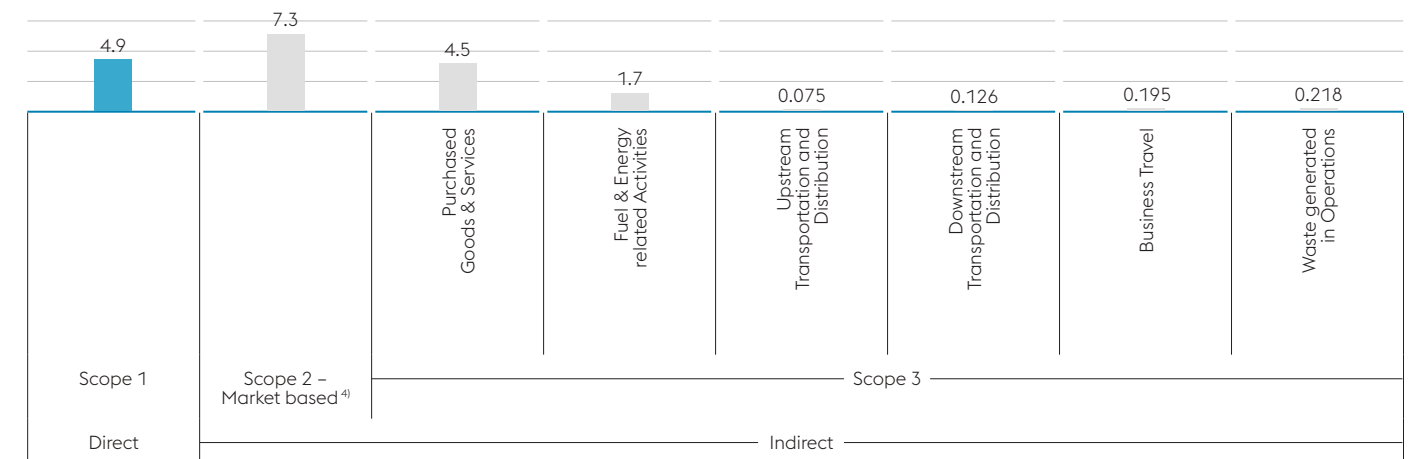
## DIRECT AND INDIRECT GHG EMISSIONS AT THE STEYRLING SITE

in [1,000 metric tons CO<sub>2</sub>e] (CO<sub>2</sub> equivalent)



## DIRECT AND INDIRECT GHG EMISSIONS AT THE TRAISEN SITE

in [1,000 metric tons CO<sub>2</sub>e] (CO<sub>2</sub>-equivalent)



In order to reach the Paris climate targets, voestalpine Stahl GmbH has launched the CO<sub>2</sub>-Reduced Steel climate project as part of a comprehensive decarbonization strategy at the Linz site. The objective is to reduce direct CO<sub>2</sub> emissions from the conventional blast furnace route in the production of high-quality steel products. The climate project is based on the requirements of ISO 14064-2:2019 and has been successfully verified by LRQA pursuant to ISO 14064-3:2019. The project optimization measures verifiably achievable emission savings in the steel production

process. Beginning in the 2019 calendar year, emissions have been confirmed by LRQA. The methodical project measures make it possible to report the carbon footprint for the products of voestalpine Stahl GmbH according to recognized methods (ISO 14044, EN 15804, worldsteel methodology etc.).

<sup>1)</sup> The Scope 1, 2 and 3 emissions at the Linz, Steyrling and Traisen sites have been verified and confirmed by an external agency. This statement was submitted as part of the EMAS verification and the CO<sub>2</sub> quantities. Scope 1, 2 and 3 stated here, however, were not verified by EMAS.

<sup>2)</sup> Scope 2, location based: 0.106 million tons of CO<sub>2</sub>e

<sup>3)</sup> Scope 2 - Location-based: 2.8 thousand tons of CO<sub>2</sub>e

<sup>4)</sup> Scope 2 - Location-based: 3.2 thousand tons of CO<sub>2</sub>e





# RESPONSIBLESTEEL

In 2019, voestalpine became one of the first steelmaking companies to join the ResponsibleSteel initiative and to commit to the principles that range from corporate governance to human and labor rights to a variety of environmental issues such as climate change, noise, wastewater, waste and biodiversity.

The manufacturing companies in the voestalpine Steel Division at the Linz site have committed themselves to the ResponsibleSteel standard and were certified as a sustainably producing steel site in the 2021/2022 business year.

The first recertification audit was successfully completed in the spring of 2024.

The responsible treatment of people and resources along the production and supply chains is our primary focus. Increased attention is also being paid to the reduction of greenhouse gases, which is intended as a visible sign of support for the United Nations' Sustainable Development Goals.







JOINT RESPONSIBILITY  
AND COMMITMENT WHEN  
DEALING WITH VALUABLE  
RESOURCES AND ENVIRON-  
MENTALLY FRIENDLY  
PRODUCTION.



# ENVIRONMENTAL FOCUS ON AIR

The reduction of emissions is an essential target. The results are very favorable.

## -98%

A savings of more than 98% dust per ton of crude steel since the mid 1980s is only one of the many values that voestalpine has substantially improved. SO<sub>2</sub> was reduced by 84%, NO<sub>x</sub> by nearly 68% and CO<sub>2</sub> by nearly 20%.



### Implementing state-of-the-art technologies takes a high priority at the Linz location in order to avoid or reduce emissions.

More than 70% of the emissions are continuously measured and are transmitted online to the local environmental authorities. The remaining emissions are assessed in compliance with official requirements in prescribed intervals.

Emissions at the Steyrling site during lime production are also monitored in accordance with the state of the art and are at a very low level. Activities involving particularly large amounts of dust, such as blasting, while taking weather conditions into account.

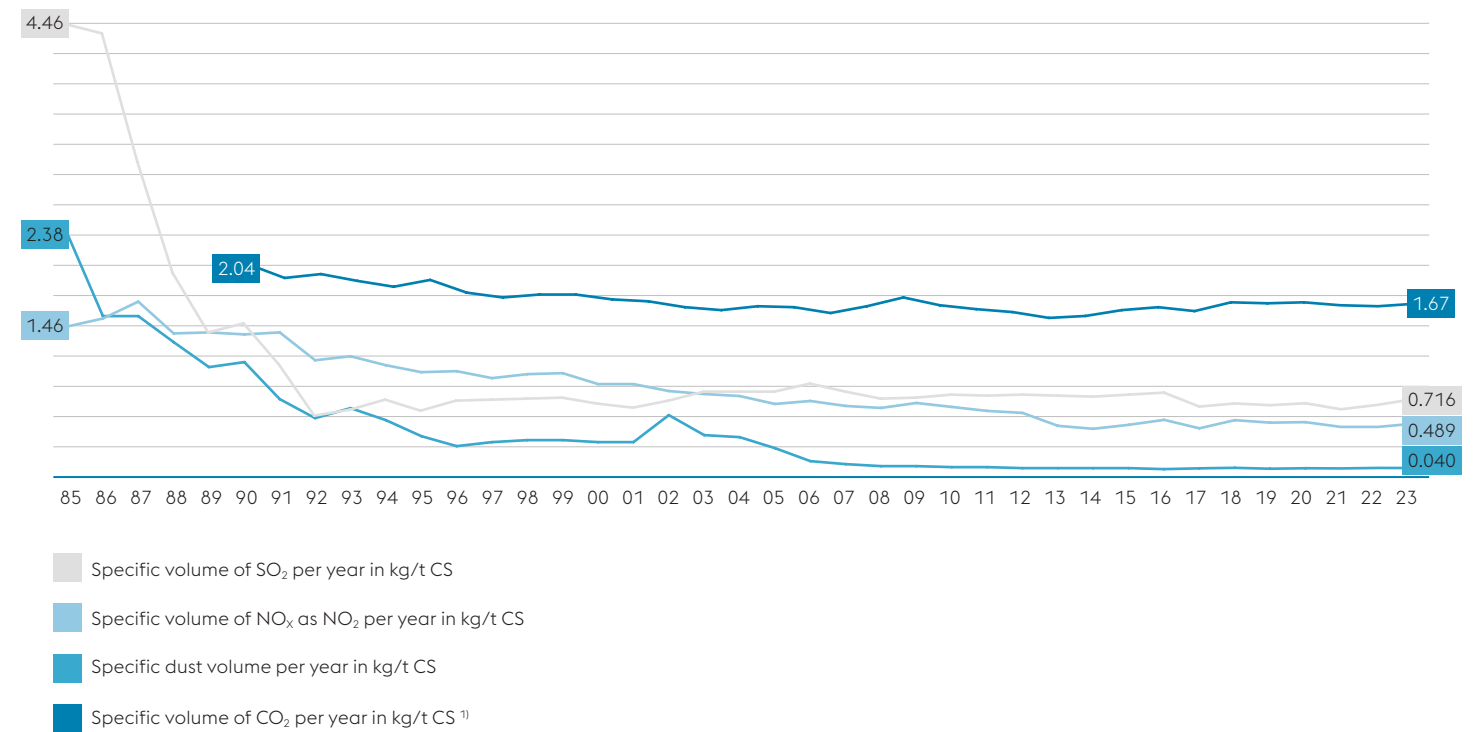
The voestalpine foundry at the Traisen location takes effective air pollution control measures to sustainably improve the air quality, meet legal obligations and pursue its own interests. Best available technologies are implemented to achieve the best results.

### Specific air emissions

Continual further development of production processes and the implementation of numerous air-pollution-control measures have led to a significant reduction in emissions.

### TREND IN EMISSIONS AT THE LINZ SITE

Per ton of crude steel since the mid 1980s



<sup>1)</sup> Tested and verified pursuant to the Emission Certificate Act (ECA) as of 2005



## Continuous emission measurements at the Linz location

NO <sub>x</sub> as NO <sub>2</sub>	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Power station	Generating Unit 06	100	74	Out of operation	Out of operation
	Generating Unit 03	100	51	65	56
	Generating Unit 04	100	31	33	40
	Generating Unit 05	100	40	34	54
	Generating Unit 07	100	60	57	50
	Gas and steam turbine	33	18	18	19
Blast furnace blower station	Central blower station 2, boiler 1	100	3	1	4
	Central blower station 2, boiler 2	100	5	7	7
Hot-rolling mill	Pusher-type furnace 06	400 <sup>1)</sup>	253	268	286
	Pusher-type furnace 07	350 <sup>2)</sup>	173	195	191
	Walking-beam furnace 1	220 <sup>3)</sup>	101	107	104
Sintering plant	Sinter belt 5	150 <sup>4)</sup>	85	88	90
Cold-rolling mill	Hot-dip galvanizing line III	250	142	151	189
	Hot-dip galvanizing line IV	250	122	116	112
	Hot-dip galvanizing line V	250	101	104	110
Heavy plates	Pusher-type furnace 1	500	369	348	309
	Pusher-type furnace 2	300 <sup>5)</sup>	151	146	186

SO <sub>2</sub>	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Power station	Generating Unit 06	200	64	Out of operation	Out of operation
	Generating Unit 03	200	81	89	90
	Generating Unit 04	200	80	81	89
	Generating Unit 05	200	77	81	96
	Generating Unit 07	200	81	86	89
	Gas and steam turbine	67	27	28	36
Blast furnace	Casting bay dedusting (BF A)	350	114	118	127
LD steelmaking plant	Secondary dedusting 1	101.5 <sup>6)</sup>	44	33	34
Hot-rolling mill	Pusher-type furnace 06	200	142	150	152
	Pusher-type furnace 07	200	65	66	63
Coking plant	Sulfuric acid and gas cleaning system	1,000 <sup>7)</sup>	392	428	399
Sintering plant	Sinter belt 5	350	293	288	296
Heavy plates	Pusher-type furnace 1	200	132	138	142

CO	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Power station	Generating Unit 03	100	4.6	7.4	6.1
	Generating Unit 04	80	26.5	19.0	27.2
	Generating Unit 05	80	16.6	20.0	14.8
	Generating Unit 07	80	5.9	10.5	8.0
	Gas and steam turbine	33	8.2	3.9	3.5
Blast furnace	Central blower station 2, boiler 1	80	0.2	0.0	0.0
	Central blower station 2, boiler 2	80	1.0	0.0	0.0
Coil coating line	Coil coating line 1	100	1.3	0.9	Out of operation
	Coil coating line 2	100	6.1	5.4	5.0

C.org	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Coil coating line	Coil coating line 1	30	1.6	1.6	Out of operation
	Coil coating line 2	30	4.0	4.8	4.7

H <sub>2</sub> S <sup>8)</sup>	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Coking plant		500	303	321	330

HF	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Sintering plant	Sinter belt 5	3.0	1.5	1.1	1.4

Hg	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Sintering plant	Sinter belt 5	0.050	0.043	0.043	0.043

Dust	Production line	Half-hour average value (mg/Nm <sup>3</sup> )	Measured annual average value (mg/Nm <sup>3</sup> )		
			Limit value	2021 CY	2022 CY
Blast furnace	Casting bay dedusting (BF A)	10	4.7	4.7	4.8
	Casting bay dedusting system (BF 5 and 6)	10	0.3	0.4	0.5
Sintering plant	Sinter belt 5	10	3.7	3.0	2.6
	Sinter plant dedusting	10	4.7	4.8	5.7
	Sinter crusher and screening unit (SIBUS)	10	1.7	1.7	1.7
	Secondary dedusting 1	10	3.8	5.2	5.3
LD steelmaking plant	Secondary dedusting 2.1	10	3.0	4.1	2.0
	Secondary dedusting 2.2	10	2.1	3.8	1.6
	Secondary dedusting 3.1	10	0.0	0.0	0.0

The emission concentrations listed in this table refer to the legally prescribed oxygen content, e.g. emission protection law on boiler plant systems, directive on iron and steel.

All emission sources are continuously monitored. The data refer to the respective calendar year.  
<sup>1)</sup> Pusher-type furnace 6: additional limitation of daily mean values for NO<sub>x</sub> of 300 mg/Nm<sup>3</sup>.  
<sup>2)</sup> Pusher-type furnace 7: additional limitation of daily mean values for NO<sub>x</sub> of 220 mg/Nm<sup>3</sup>.  
<sup>3)</sup> HBO 1: additional limitation of daily mean values for NO<sub>x</sub> of 130 mg/Nm<sup>3</sup>.  
<sup>4)</sup> Sinter belt No. 5: additional limitation of daily mean values for NO<sub>x</sub> of 100 mg/Nm<sup>3</sup>.

<sup>5)</sup> Pusher-type furnace 2: additional limitation of daily mean values for NO<sub>x</sub> of 200 mg/Nm<sup>3</sup>.  
<sup>6)</sup> SO<sub>2</sub> threshold and values measured in kg/h.  
<sup>7)</sup> There is also a fraction limit value of 150 kg SO<sub>2</sub>/day under normal operating conditions.

All emission sources are continuously monitored. The data refer to the respective calendar year.  
<sup>8)</sup> H<sub>2</sub>S is contained in the coke gas that is energetically utilized in other process steps. Emissions only occur as SO<sub>2</sub>.

## Emission measurements at the Steyrling location

NO <sub>x</sub> as NO <sub>2</sub>	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			Steyrling Lime Plant	Furnace 4	300
	Furnace 5	300	13	13	15
	Furnace 6	300	16,3	21	18,3
	Furnace 7	300	<sup>1)</sup>	17	20

CO	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			Steyrling Lime Plant	Furnace 4	150
	Furnace 5	150	8.3	9.7	13.3
	Furnace 6	150	9	9	11.3
	Furnace 7	150	<sup>1)</sup>	8.3	11.3

SO <sub>2</sub>	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			Steyrling Lime Plant	Furnace 4	100
	Furnace 5	100	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>
	Furnace 6	100	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>
	Furnace 7	100	<sup>1)</sup>	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>

C.org	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			Steyrling Lime Plant	Furnace 4	30
	Furnace 5	30	4.3	16.3	17.7
	Furnace 6	30	2.3	4.3	5.7
	Furnace 7	30	<sup>1)</sup>	8.7	8

Dust	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			Steyrling Lime Plant	Furnace 4	10
	Furnace 5	10	5.9	2.4	4
	Furnace 6	10	0.3	1.4	1.47
	Furnace 7	10	<sup>1)</sup>	< NWG <sup>2)</sup>	< NWG <sup>2)</sup>
	Furnace discharge 4	10	<sup>3)</sup>	Stand By	<sup>3)</sup>
	Furnace discharge 5	10	<sup>3)</sup>	3.9	<sup>3)</sup>
	Furnace discharge 6	10	<sup>3)</sup>	3.3	<sup>3)</sup>
	Furnace discharge 7	10	<sup>3)</sup>	1.5	<sup>3)</sup>
	Lime extraction	10	<sup>3)</sup>	9.6	<sup>3)</sup>
	Lime loading	10	<sup>3)</sup>	0.9	<sup>3)</sup>

## Emission measurements in essential production systems at the Traisen location

Dust	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	10
	Mixer 1. molding line	10	<sup>1)</sup>	6.4	<sup>1)</sup>
	AAF Bay 3	10	<sup>1)</sup>	2.4	<sup>1)</sup>

NO <sub>x</sub> as NO <sub>2</sub>	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			voestalpine Giesserei Traisen GmbH & Co KG	Annealing Furnace 2	350 (at < 800 °C)
	Annealing Furnace 7	350 (at < 800 °C)	210	<sup>1)</sup>	<sup>1)</sup>
	Annealing Furnace 9	350 (at < 800 °C)	117	<sup>1)</sup>	<sup>1)</sup>

C.org	Production line	Limit value (mg/Nm <sup>3</sup> )	Measured value (mg/Nm <sup>3</sup> )		
			2021 CY	2022 CY	2023 CY
			voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	50
	Mixer 1. molding line	20 (materials of Class 1)	<sup>1)</sup>	13	<sup>1)</sup>
		100 (materials of Class 2)	<sup>1)</sup>	13	<sup>1)</sup>
		150 (materials of Class 3)	<sup>1)</sup>	13	<sup>1)</sup>
	AAF Bay 3	20 (materials of Class 1)	<sup>1)</sup>	3.3	<sup>1)</sup>
		100 (materials of Class 2)	<sup>1)</sup>	3.3	<sup>1)</sup>
		150 (materials of Class 3)	<sup>1)</sup>	3.3	<sup>1)</sup>

<sup>1)</sup> Modernization of Lime Furnace 7 in the 2021 calendar year, no measurements taken because of shutdown

<sup>2)</sup> Below the detection limit for pollutants

<sup>3)</sup> Measurement interval every 3 years, next measurement in the 2025 CY

<sup>1)</sup> Measurement intervals every three years

<sup>2)</sup> Below the detection limit for pollutants



# ENVIRONMENTAL FOCUS ON ENERGY

**Sustainable management of energy resources is an essential principle at voestalpine.**

## > 10%

By optimizing production processes and cascading the energy used, specific energy consumption at the Linz location has been reduced by more than 10% over the past 20 years. At the Linz location, nearly 80% of the electrical energy is generated by the company itself.

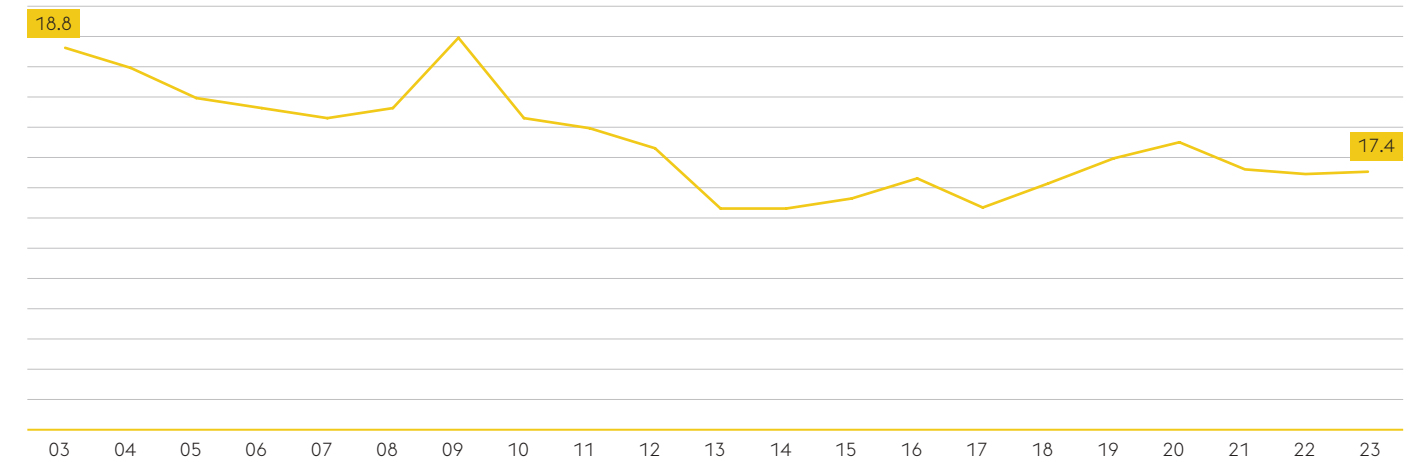


In our efficient use of energy, we also focus on optimization of process gas utilization and energy recovery. Consistent energy monitoring and continuous plant system optimization for increased overall energy efficiency.

The voestalpine foundry in Traisen ensures that materials and energy are used in an environmentally friendly and resource-conserving manner in all production cycles. We continually surmount new challenges and implement new standards in order to live up to our social responsibility.

### NET ENERGY CONSUMPTION

per ton of crude steel



Specific net energy consumption in gigajoules per ton of crude steel

The energy required in steelmaking is derived primarily from coal, coke, natural gas and electricity. Process gases (coke-oven gas, blast-furnace gas and converter gas) generated in the making of steel are used as energy-transfer media either directly or by efficiently converting the gases into heat or electrical energy in individual process steps. The active contributions of each employee to environmental protection and energy savings are of great value.

The spectrum ranges from small measures to larger, comprehensive projects such as Torch 4, reduction of stirring gas. These and many other measures have saved 42,000 MWh during the 2023 calendar year.

# ENVIRONMENTAL FOCUS ON WATER

## Circular economy

# 90%

Total water consumption at the Linz location amounted in 2023 to roughly 597 million cubic meters, of which roughly 90% (a total of 536 million cubic meters) was used as cooling water and returned to the Danube and Traun rivers without any pollution.



Water is one of the most important operating supplies. It is needed to cool production systems and to create steam in iron and steel production.

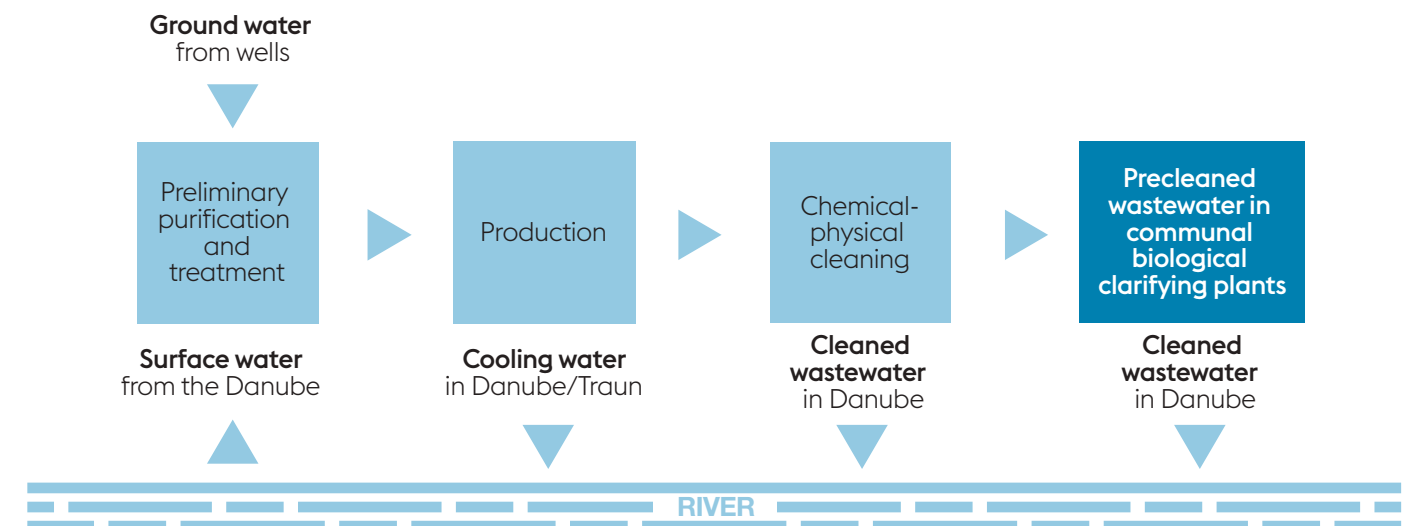
A total of 536 million cubic meters of water were pumped from the Danube for cooling at the Linz location during the 2023 calendar year. This cooling water is channeled back into the Danube in compliance with the defined temperature limit values. Depending on the wastewater constituents, was either cleaned before returning it to the Danube or was piped to the municipal wastewater treatment plant in Asten for biological treatment.

The sustainable management of water resources, particularly in compliance with local conditions, is an essential priority of voestalpine.

Functional water circulation is the foundation for an operational system. This is why voestalpine Giesserei Traisen strives to achieve sustainable resource management by linking water management with energy and environmental services under the premise of preserving flora and fauna.

The production facilities of voestalpine in Linz are located in a water-rich catchment area. Taking into account actual water consumption, water availability at catchment level and upstream supply, impact of the production facilities at the Linz site is relatively low. This determination is based on the Available Water Remaining (AWaRe) methodology for quantifying water scarcity. This statement is based on a survey of the Water Scarcity Footprint in 2018 as well as an update in 2022 that was performed based on cradle-to-gate observations.

CAREFUL TREATMENT OF WATER AS A NATURAL RESOURCE IS REGARDED AS A FUNDAMENTAL PRIORITY AT voestalpine.

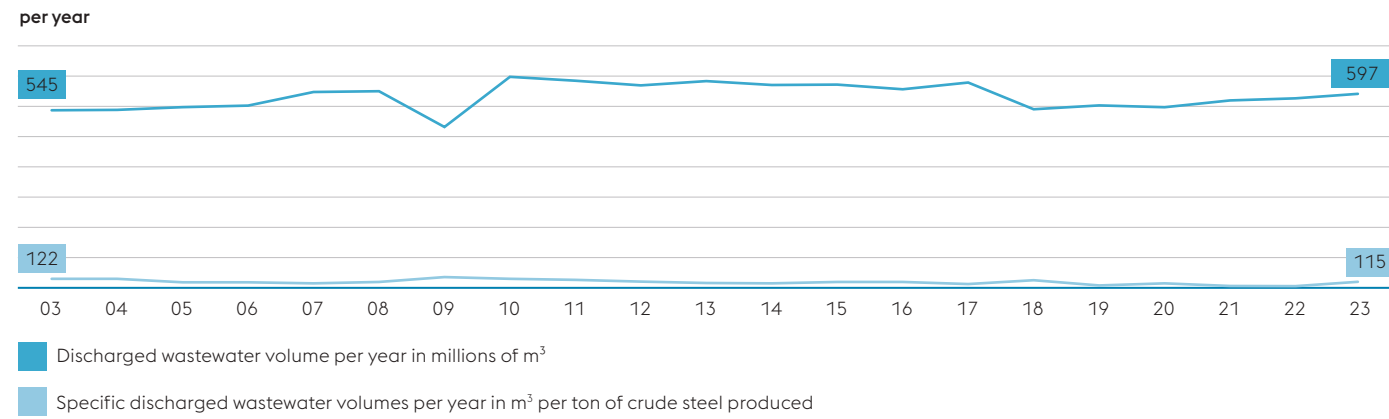




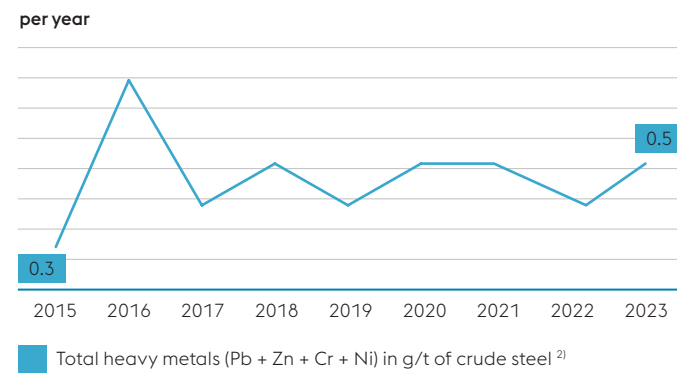
## Trends in discharged wastewater volumes <sup>1)</sup>

In the 2023 calendar year, the amount of discharged water amounted to 115 m<sup>3</sup> per ton of crude steel.

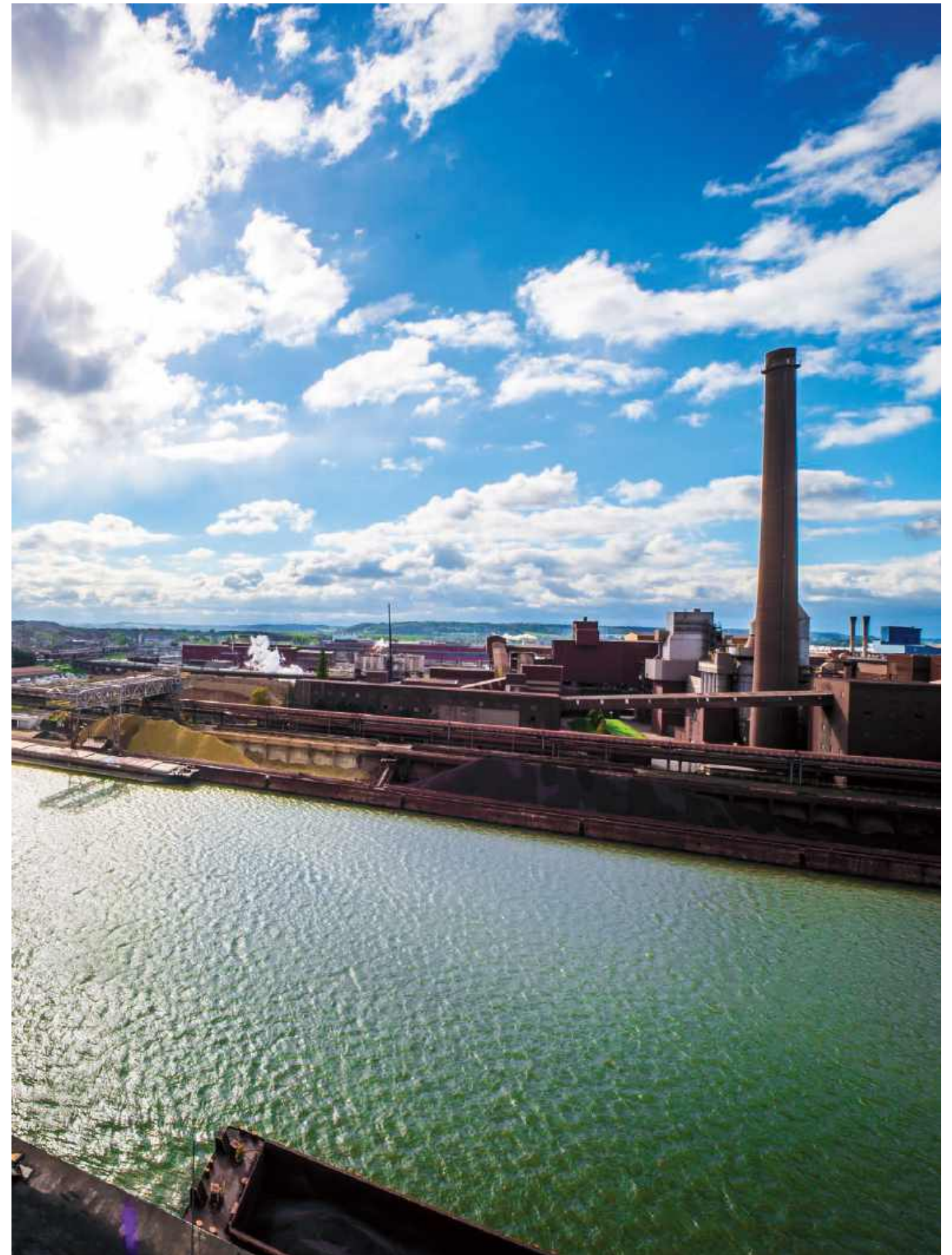
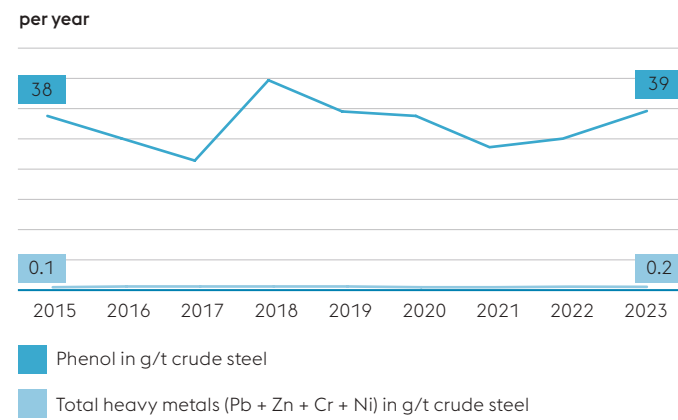
### WATER DISCHARGE VOLUMES



### SPECIFIC DISCHARGE INTO DANUBE



### DISCHARGE INTO MUNICIPAL WASTEWATER TREATMENT PLANT



<sup>1)</sup> The water discharge volume consists of many partial flows for which limit values are set and observed.

<sup>2)</sup> minus initial load from Danube



# ENVIRONMENTAL FOCUS ON WASTE

The objective is to reduce and reuse waste.

# 89%

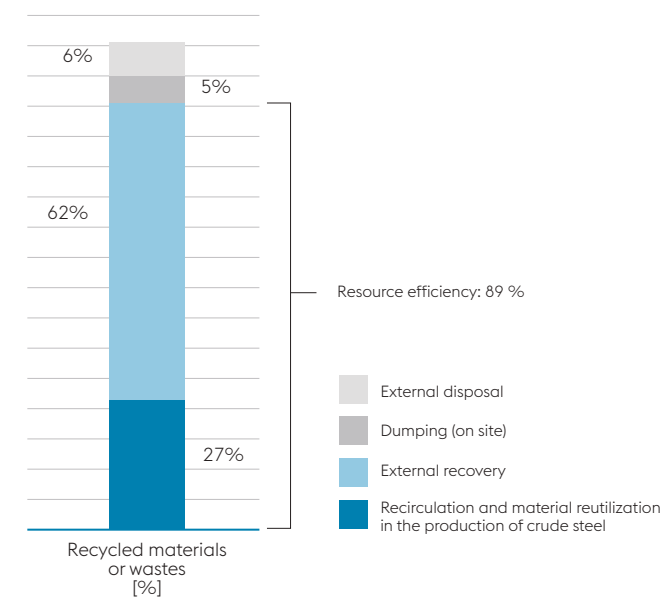
Material recycling and the portion of re-used waste materials in total amount to a resource efficiency of 89% with respect to all waste processed off site and on site.



Steelmaking operations generate waste and recyclable materials, which due to their content are largely returned to the production process or recycled in other industries. This conserves natural raw materials. Waste and secondary raw materials are utilized in both in-house and external production process. Examples of this are scrap, end-of-life oils and waste greases. The following graphic provides an overview of utilized resources in the form of waste and recycled materials at the Linz location (not including scrap).

## RESOURCE EFFICIENCY

Recyclable and waste materials incurred at the Linz location



In the 2023 calendar year, roughly 27% of the recycled materials and waste incurred at the Linz location were re-utilized, thus increasing resource efficiency in production processes. (This value increases to 51% when in-house scrap recycling is taken into account.)

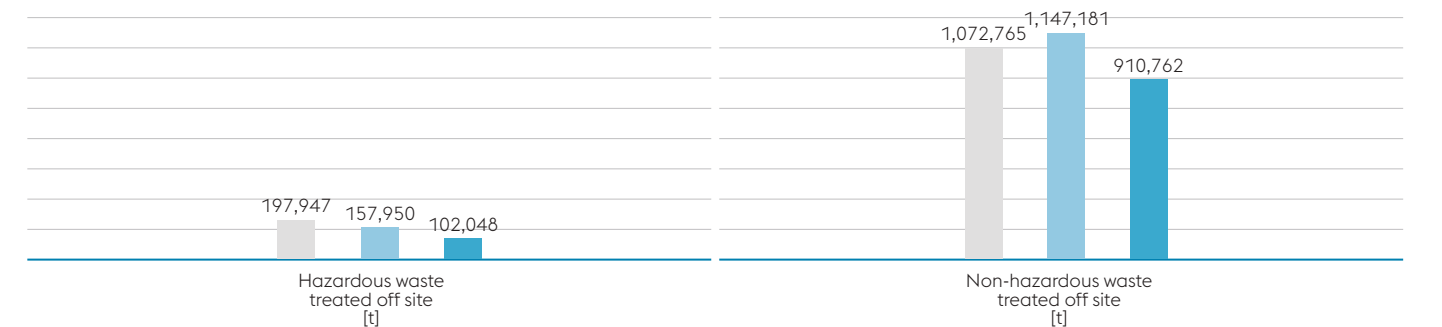
Material recycling and the portion of re-used waste materials in total amount to a resource efficiency of 89% with respect to all waste processed off site and on site.

Sustainable policies to conserve natural resources play an essential role at the Traisen location. The aim of material management is to use the materials taken from nature as intensively as possible and to return them to production cycles.

## WASTE

2021 2022 2023

Waste from production in Linz that is treated off site



# ENVIRONMENTAL FOCUS ON TRANSPORTS

More rail, less road.

# 57%

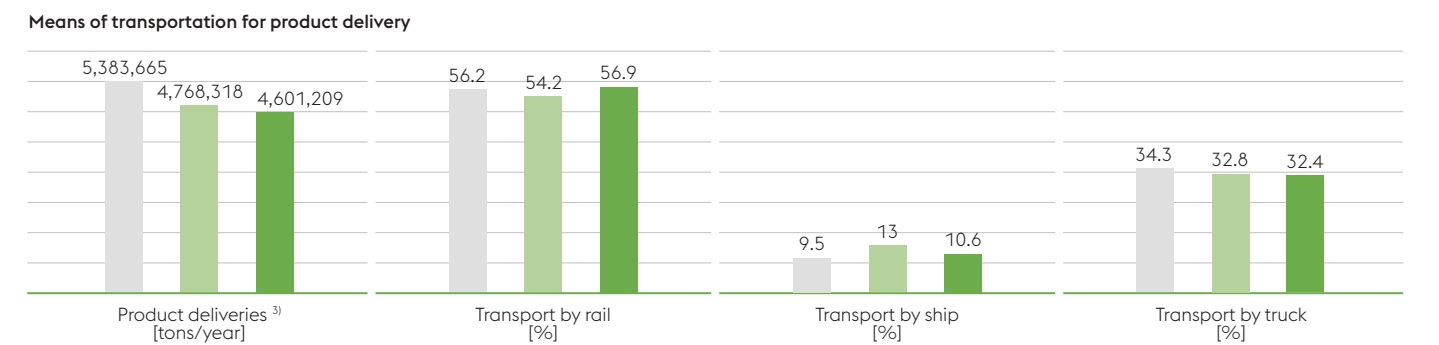
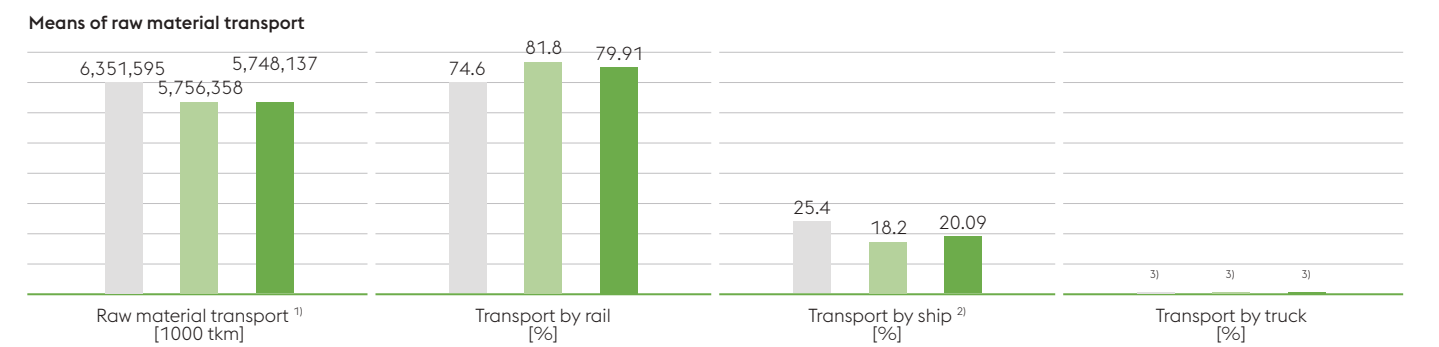
56.9% of the products are delivered by rail. In the case of raw materials, the figure is even as high as nearly 80% by rail, 20% by ship and less than 0.1% by truck (Linz location, 2023).



Material supply and product delivery are by railway, waterway or truck. It is important to us that our transports are as ecological as possible. Logistik Service GmbH and Cargo Service GmbH combine their transport possibilities, e.g. mobile systems, in order to avoid empty hauls and rely heavily on continual improvements in logistics systems, in technologies, implementation, methods, environmentally compatible driving techniques. Where possible, as many transports as possible are transferred from the roadway to the more environmentally compatible railway.

The figures for distribution of raw materials transported within Europe and distribution of product deliveries to the individual means of transport are as follows in the 2022 calendar year:

**LOGSERV + CARGOSERV RAW MATERIAL TRANSPORTS AT THE LINZ AND STEYRLING LOCATIONS** 2021 2022 2023



The definition of diffuse emissions is extremely difficult because of the large number of transport routes in use by the various means of transport (railway, ship, truck) with a wide variety of engine and vehicle technologies.

For this reason, no direct emission assessment is made for the transport of raw materials and for the delivery of products to voestalpine at the Linz location. Only the modal split is used as evaluation criteria for the assessment according to the respective transport routes. An assessment of greenhouse gases was carried out as part of the chapter on direct and indirect greenhouse gas emissions.

Customers throughout the world are supplied by voestalpine Giesserei Traisen GmbH & Co KG. In collaboration with a dynamic network of suppliers and customers, the challenge is to achieve sustainable development in each process stage of the supply chain. The geographical location and the infrastructure in Traisen provide only few possibilities for loading and unloading. Strategic decisions must yet be made with respect to the selection of suppliers, delivery windows and the efficient use of transport vehicles based on product and market requirements.

<sup>1)</sup> Raw material deliveries in ton kilometers of ore, coal, scrap, lime, coke and coke breeze  
<sup>2)</sup> Raw material transports on inland waterways  
<sup>3)</sup> Products supplied from the Linz location by Logistik Service GmbH and Cargo Service GmbH



# ADDITIONAL ENVIRONMENTAL IMPACT

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PROTECTING OUR NEIGHBORS FROM NOISE AND OBNOXIOUS ODORS IS ALSO ONE OF OUR MOST IMPORTANT PRIORITIES.



## BIODIVERSITY

At every production site, voestalpine treats local ecosystems responsibly and actively contributes to the promotion of biodiversity.

At the Linz location, for example, flowering areas have been created on a surface area of roughly 20,000 square meters. The wildflower meadow provides many insect species, especially bees, with an additional food source. Insect hotels also offer a breeding location for rare species. Several biotopes have been created for the highly endangered green toad. Comprehensive biomonitoring has been carried out throughout the site for many years. In the context of an EIA procedure prior to the major construction projects in the past few years, the necessity of protective measures for living organisms at and around the site has been taken into careful consideration. The ongoing renaturation of decommissioned mining areas at the Steyrling site is an important contribution to the conservation of resources.

## VIBRATIONS

Lime-containing rock is mined from the walls of an open pit at the Steyrling location by means of conventional blasting. This can cause ground vibration. Blasting activities are announced to neighboring parties ahead of time.

Production and transport-related vibrations at the Traisen location are transmitted through the soil as a result of the geological and geographical conditions. Technological and organizational measures are implemented in order to avoid vibrations during operation of various production systems and processing.

## RADIATION

All raw materials at the Linz and Traisen locations are inspected thoroughly for radiation by highly sensitive devices before they are delivered to production facilities. Radioactive tests are conducted on all heats of the intermediate hot-metal product to exclude any risk.

## NOISE

The works premises in Linz has been divided into 16 contingency sections according to the environmental impact assessment (L6). Higher noise loads of individual surface areas can be balanced by surface areas that do not reach permissible noise levels. From the perspective of neighborhood protection, limitation of noise emissions is important with respect to on-site expansion. In the event any complaints from residents surrounding the Linz, Steyrling and Traisen locations, a root cause analysis is carried out and, if necessary, appropriate measures are initiated and implemented. One external complaint (dust) was registered at the Linz location during the 2023/24 financial year, and this has been addressed by voestalpine.

## ODOR

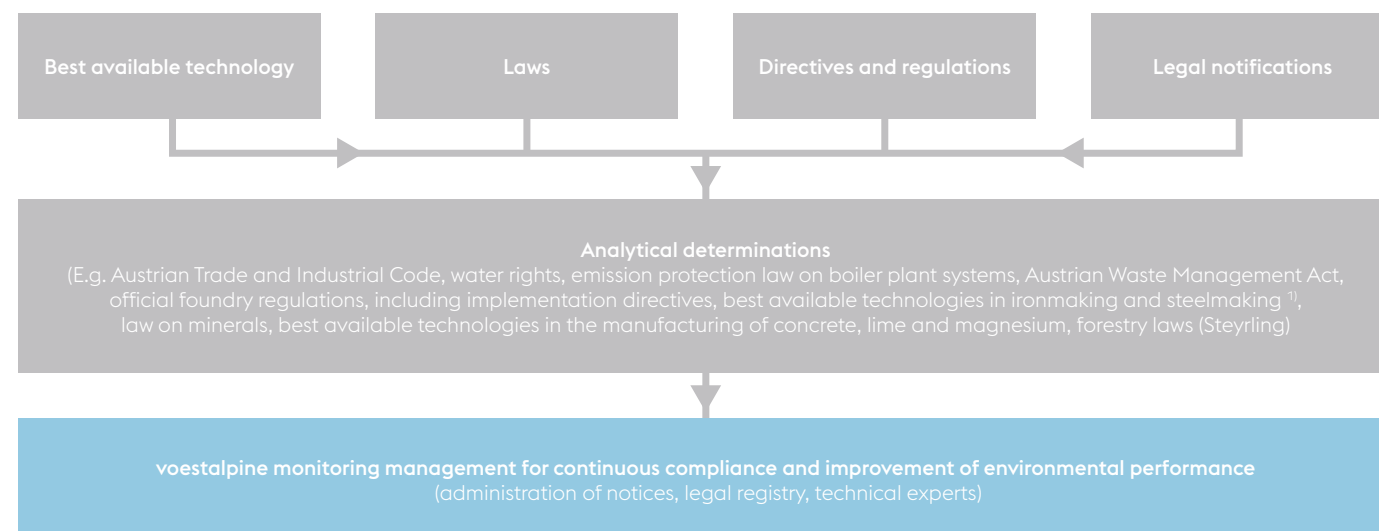
Based on measures taken in the past to prevent and minimize emissions at the Linz location, a favorable level has now been achieved to the effect that no adverse odors are produced.



# LEGAL MANAGEMENT OF ENVIRONMENTAL ASPECTS

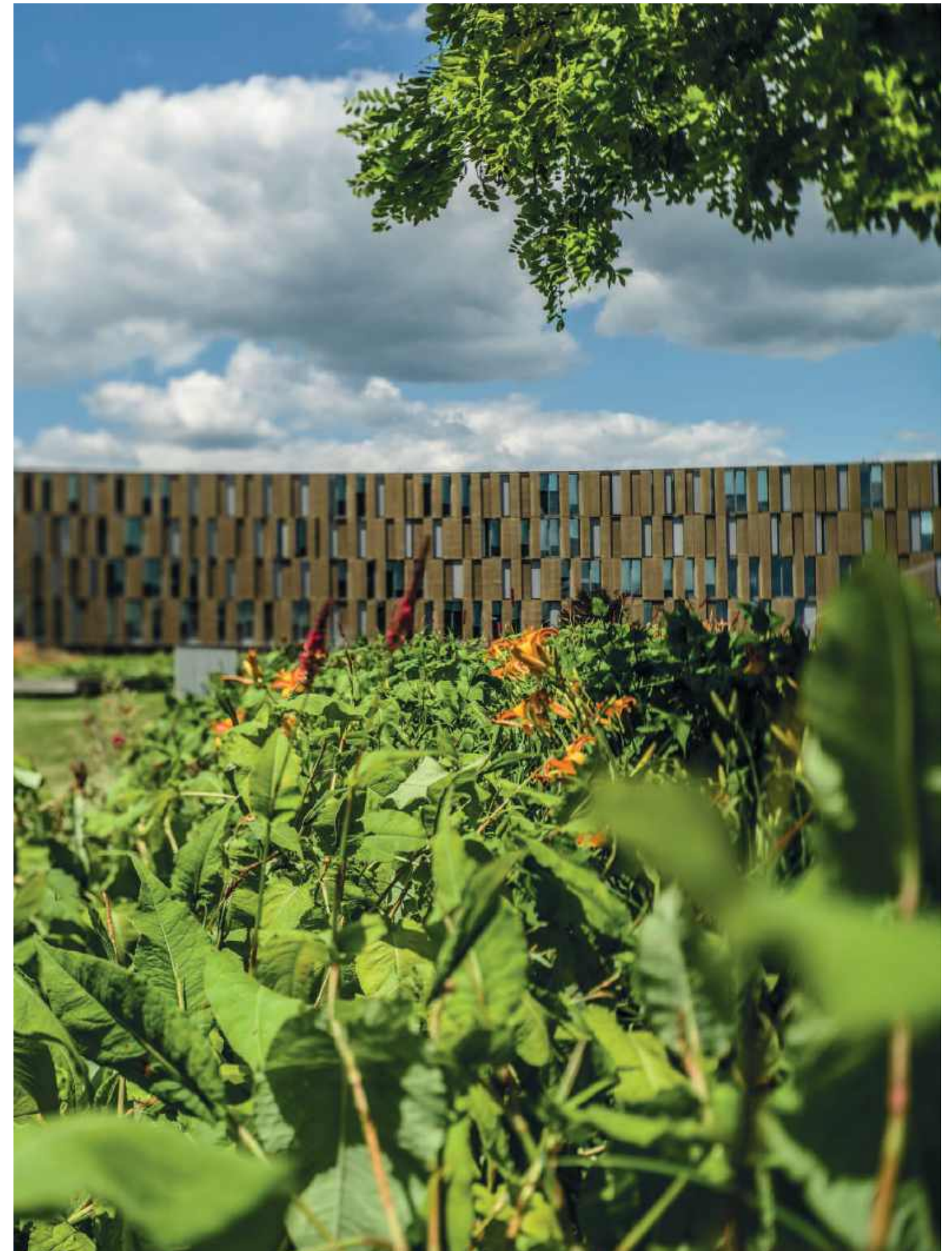
The Linz, Steyrling and Traisen locations of voestalpine operate a certified/validated environmental management system pursuant to ISO 14001 and EMAS. As part of the integrated management system, concrete objectives have been identified, a program has been in place to implement measures and regularly audit progress. The same applies to our legal compliance policies that ensure company adherence to all applicable legal regulations. Any non-consensual operation is reported to the authorities, and appropriate corrective measures are taken. Specialized environmental skills and expertise have been made possible only by creating a high level of environmental awareness among the employees throughout the Group.

## COMPLIANCE WITH ENVIRONMENTAL REGULATIONS



The production facilities of voestalpine have been subject to ongoing environmental adaptations that meet state-of-the-art requirements. The BAT conclusions (BAT = best available technology) to be implemented in accordance with the Industrial Emissions Directive (IED) are systematically and proactively processed and documented by a team of company experts with competent authorities. Any improvement measures are implemented in accordance with established time schedules. Implementation is reviewed internally as well as in the context of environmental inspections.

<sup>1)</sup> Best available techniques in relation to the production of iron and steel









# SAFETY TAKES HIGHEST PRIORITY SEVESO PRODUCTION SYSTEMS

## External emergency plan

Detailed information on the alarms and measures outside the works premises can be found in the external emergency plan issued by the fire department of the city of Linz. Required measures in the event of Danger Level III are contained in the internal emergency plan. The safety report complies with Section 84f of the Trade and Industrial Code dated 1994 and is available for review in the Environment Department of voestalpine Stahl GmbH.

## Information to the public on safety measures and correct behavior in the event of industrial accidents pursuant to Section 14 of the Industrial Accident Act.

At the Linz production site, voestalpine Stahl GmbH operates plant systems that are subject to Section 8a of the Trade and Industrial Code of 1994 and the Industrial Accident Act and provides the following information on safety measures and proper behavior in the event of industrial accidents. Not every plant system failure is an industrial accident, which is defined as an event in which certain hazardous substances are released that pose a danger to humans or to the environment.

The precautions to be taken to prevent and limit industrial accidents are set forth in the Industrial Accident Act. Because of the comprehensive safety measures that have been taken for many years in production, the probability of neighbors being affected by an industrial accident is very low. An industrial accident can only occur in the event that all the precautionary technical and organizational measures simultaneously fail. In the unlikely event that an industrial accident occurs in spite of all the safety measures that have been implemented, the following information provides an overview of steps that can be taken.

There are six relevant plant areas in the integrated metallurgical facility that could have an effect beyond the works premises in the unlikely event of an industrial accident:

- » Coke oven batteries, including coke gas recovery, conveyor system and gasometer.
- » Tar extraction and crude benzene plant, including storage tank
- » Blast furnaces, including gas cleaning, conveyor system and gasometer
- » Converter operations, including converter gas cleaning, conveyor system and gasometer
- » Unloading of fuel oil and distribution into piping and storage tanks
- » Storage and distribution lines for calcium carbide in the steelmaking plant

Steam reformers A and B and air disintegration units 8 through 10 are operated by Linde Gas GmbH according to the Linde low-pressure technology and are safety-relevant systems installed on the works premises in Linz.

The substances contained in the systems of voestalpine Stahl GmbH and Linde Gas GmbH are subject to the provisions set forth in Section 8a of the Trade and Industrial Code dated 1994.



COMPREHENSIVE SAFETY MEASURES ARE IN PLACE TO ENSURE THAT THE RISK OF AN INDUSTRIAL ACCIDENT IS EXTREMELY LOW.

The authorities have been notified pursuant to Section 84d of the Trade and Industrial Code. Corresponding safety and security reports were submitted to the authority (Magistrate of the Provincial Capital of Linz, Office of the Provincial Government). The information is submitted to or updated at regular intervals and can be consulted there. This environmental report is also available at Central Works Security Post A.

The following safety aspects are taken into account in the safety report submitted:

- » Processes and reactions occur in closed systems.
- » Hazardous substances are replaced where possible and remaining amounts are reduced to the specifically required volumes.
- » The avoidance of waste takes a high priority in the planning and operation of plants.
- » Safety systems generally consist of multiple stages.
- » The plants are operated, maintained and tested by qualified and regularly re-trained personnel.

The plants are regularly tested in accordance with legal regulations by in-house and external experts (such as TÜV). Stringent safety regulations are assessed by the authorities for all designated plant systems. As a result of these regulations and precautions taken by the operators, there has never been an accident at the works since it has existed that would have posed any hazard to the population. In spite of the high safety standards, then risk of accidents can never be completely eliminated. Even though the probability of an accident with effects beyond the works premises is very low, voestalpine Stahl GmbH nevertheless takes this opportunity to inform the public in a precautionary manner of possible effects and measures to take in the event of an accident.



## Information on possibly hazardous plant systems and production activities

### COKE OVEN BATTERIES, INCLUDING COKE GAS RECOVERY, CONVEYOR SYSTEM AND GASOMETER

The coke required in the blast furnace is produced in the coke plant. For this purpose, finely ground coal is heated in coke ovens that are arranged in batteries each containing a total of 40 ovens. The coal is heated for approximately 18 hours to a temperature of roughly 1,250 °C. The coal is converted into coke, which means that it is baked until it has released all its gaseous constituents. These gaseous constituents make up the coke gas that is cleaned to a high degree in the coke plant and is then used as a fuel gas in the power plant and other furnace systems throughout the steel works. A gasometer and a network of gas lines store the gas until it is used. The system of course is closed. Coke gas contains approximately 7% carbon monoxide and is, as are all flammable gases, combustible with certain amounts of air.

### TAR EXTRACTION AND CRUDE BENZENE PLANT, INCLUDING STORAGE TANK

Crude tar and crude benzene occur as co-products during the high-grade cleaning of the coke gas. Crude benzene is cleaned out of the coke gas by means of wash oil in two scrubbers. It is then removed by means of distillation from the circulating wash oil and stored intermediately in a 2,000 m<sup>3</sup> tank before it is delivered to purchasers. The crude benzene storage tank is suctioned out. The filling process is by means of a gas displacement device to ensure that no emissions can be released. Crude benzene contains up to 85% benzene. The fumes are, as with all other flammable liquids, combustible when mixed with certain amount of air. The crude tar condenses with condensation from the crude coke gas and is separated in tar separators from the condensate. Crude tar is pumped through the intermediate tar containers into the crude tar tanks. The individual parts of the tar separator units are equipped with a liquid-tight bucket system to prevent any emission to the environment. The crude tar and crude benzene are contained in tank railcars until they are used in the closed systems of production lines.

### BLAST FURNACES, INCLUDING GAS CLEANING, CONVEYOR SYSTEM AND GASOMETER

Blast furnace gas is a by-product and co-product that occurs during the production of hot metal in the blast furnace. This blast furnace gas is cleaned to a high degree, removing all the dusts, and is used as a fuel gas in the blast furnace itself, the power plant, in the coke plant and other furnace systems throughout the steel works. A gasometer and a network of gas lines store the gas until it is used. The entire network is a closed system. Blast furnace gas contains approximately 25% carbon monoxide and is, as are all flammable gases, combustible with certain amounts of air.

### CONVERTER OPERATIONS, INCLUDING CONVERTER GAS CLEANING, CONVEYOR SYSTEM AND GASOMETER

Steel chemically differs from iron primarily in its lower carbon content. The carbon contained in the crude iron produced in the blast furnace is removed from the steel melt by means of the oxygen top-blowing process during steelmaking in the LD steel plant. This process yields the so-called converter gas that is subjected to a high-grade cleaning process in electric filters and then added in a controlled manner to the top gas in order to increase its calorific value. A gasometer and a network of gas lines store the gas until it is used. The system of course is closed. Converter gas contains approximately 60% carbon monoxide and is, as are all flammable gases, combustible with certain amounts of air.

### AIR SEPARATION UNIT

Air is divided in air separation units (8 through 10) belonging to Linde Gas GmbH by means of rectification into nitrogen, oxygen and argon constituents. The generated gases are either piped in gaseous form to consumers in the works of voestalpine Stahl GmbH or to the Chemiepark or they are liquefied, stored at super-cooled temperatures and filled into tank cars. In addition to the air as a raw material and different energies, hydrogen is also required in argon fine cleaning system (8) of the air separation unit. This hydrogen is supplied by the hydrogen production facility at voestalpine.

### HYDROGEN PRODUCTION FACILITY

Natural gas is converted through chemical reactions into hydrogen in the steam reformers (STR A and B) of Linde Gas GmbH. The gaseous hydrogen is used in-house and is supplied to voestalpine Stahl GmbH and Chemiepark in Linz. External customer supply is provided on trailer units.

### UNLOADING OF FUEL OIL AND DISTRIBUTION INTO PIPING AND STORAGE TANKS

Light fuel oil is delivered in tank trucks and pumped into the storage tanks at the power station of voestalpine Stahl GmbH. The light fuel oil is pumped through piping from the storage tank to block 7 of the power plant of voestalpine Stahl GmbH. The light fuel oil is used in the event that other fuels, such as the usually used metallurgical gases and natural gas, are temporarily not available. In order to ensure that the light fuel oil is ready for use, it is continuously circulated in piping between the storage tank and the power station in order to maintain the required temperature and pressure.

### STORAGE AND DISTRIBUTION LINES FOR CALCIUM CARBIDE IN THE STEELMAKING PLANT

The hot metal is combined with scrap and additives in three converters in the LD steelmaking plant. The mixture is converted in an oxygen blowing process at approximately 1,650 °C to crude steel. Further treatment takes place in the ladle furnace and in the vacuum degassing unit. The molten steel is cast in the continuous caster into slabs.

Calcium carbide is used in the steelmaking plant to remove sulfur (desulfurization) and oxygen (deoxidation) from the hot metal.

A high standard of safety is guaranteed by continuous monitoring by plant personnel, regular tests and the safety precautions described above. Should an industrial accident occur, however, in spite of all the technical and organizational preparation made to prevent such an incident, the emission of poisonous substances still poses a possible danger in addition to explosion and fire. In such an instance, affects to human health and the natural environment outside the works premises, especially caused by gas or fumes that may be carried over distances, cannot be excluded.



## Information on the types of dangers and their possible consequences

The following substances when emitted into the atmosphere pose a potential danger beyond the premises of the steel works.

### CARBON MONOXIDE

Carbon monoxide is contained in:

- » Coking plant gas (approx. 7 volume percent CO)
- » Blast furnace gas (approx. 25 volume percent CO)
- » Converter gas (approx. 60 volume percent CO)

The listed process gases are easily combustible and are poisonous because of their CO content. When emitted to the atmosphere, these gases are diluted with atmospheric air to differing degrees that lead to various symptoms depending on the respective concentrations. These symptoms may include headache, dizziness, sickness, sleepiness, asphyxiation, unconsciousness and respiratory paralysis. Patients must be exposed to fresh air, must rest comfortably and tight clothing must be loosened. In the event of apnea, resuscitation is required to introduce oxygen to the brain. Call a doctor. Keep patients warm. In the event of threatening unconsciousness, place the patient on his or her side and transport in stable position.

### BENZENE

Patients must be exposed to fresh air, must rest comfortably and tight clothing must be loosened. Resuscitate immediately in the event of apnea. Remove contaminated clothing immediately. Rinse contaminated skin sufficiently with water. Rinse contaminated eyes adequately with water for ten to fifteen minutes. Call a doctor. Keep patients warm. In the event of threatening unconsciousness, place the patient on his or her side and transport in stable position.

### ATMOSPHERIC GASES AND HYDROGEN

Because of their volumes and properties (both not poisonous) and distances to other substances, the hazardous substances (oxygen, nitrogen, argon and hydrogen) contained in the air separation and hydrogen production units are not potentially hazardous outside the premises of voestalpine Stahl GmbH.

### CALCIUM CARBIDE

The carbide mixture in the hopper contains essential constituents as follows:

Calcium carbide (CaC <sub>2</sub> ):	63.1%–72.3%
Coal, including volatile constituents:	5.5%
Carbon content:	32.59%–19.14%
Additional fluxes:	3.0%

Calcium carbide is not a flammable substance. Acetylene develops in the presence of moisture and mixes with air to form an explosive gas atmosphere and calcium hydroxide. The humidity from the air is enough to begin the reaction. Under atmospheric conditions, one ton of calcium carbide of technical quality (roughly 68% CaC<sub>2</sub>) in reaction with water yields roughly 258 Nm<sup>3</sup> of acetylene gas.

### MEASURES

The measures taken to eliminate accidents and limit the consequences of an accident are regulated in the emergency plan of voestalpine Stahl GmbH. This plan is regularly updated in collaboration with the Municipal Offices of the Provincial Capital City of Linz and the fire department of Linz pursuant to the pertinent official regulations of the provincial capital of Linz.

The measures to be taken in the event of an incident are obligatory. The safety report of voestalpine Stahl GmbH is submitted on a regular basis to the authorities. The report is an integral part of the tests carried out by the responsible authorities that also serve to meet requirements and adaptations pursuant to Section 8a of the Trade and Industrial Code dated 1994.

With respect to the air separation unit, a safety report has also been submitted by Linde Gas GmbH.

### EXTERNAL EMERGENCY PLAN

Detailed information on the alarms and measures outside the works premises can be found in the external emergency plan issued by the fire department of the city of Linz. Required measures in the event of Danger Level III are contained in the internal emergency plan. Notification procedures (excerpt from the emergency plan of voestalpine Stahl GmbH). The following measures have been determined in accordance with the emergency plan of voestalpine Stahl GmbH:

- » Works fire department responds to the scene with all fire trucks and breathing apparatus vehicle
- » Fire department of the City of Linz responds to the scene
- » Establishment of a command center on site managed by City of Linz fire department
- » Measurements taken to eliminate dangers such as cordoning off areas by the gas search troop, evacuation of the cordoned-off area, radio announcements

### Warning

The public is warned by means of sirens in the event of an extraordinary incident. Industrial accidents on the premises of voestalpine Stahl GmbH and steps to take by the public are announced on public radio and television stations. This procedure and the type of reports required by the authorities are defined in the in-house emergency plan submitted to the authorities.

### Note

Please do not call emergency telephone numbers without any important reason. This will ensure that the lines remain open for actual emergencies.

### Contact numbers for inquiries and further information

Central office: T. +43/50304/15-5077 bzw. +43/50304/15-2629  
Environmental Department: T. +43/50304/15-9806  
Occupational Safety Department: T. +43/50304/15-9806  
Linde Gas GmbH: T. +43/50/4273-1616

### Link to Environmental Report on the Internet:

[www.voestalpine.com/stahl/Die-Steel-Division/Umwelt](http://www.voestalpine.com/stahl/Die-Steel-Division/Umwelt)

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OVERVIEW OF  
POTENTIAL HAZARDS  
AND COMPREHENSIVE  
EMERGENCY PLANS FOR  
THE FACTORY PREMISES.



# INFORMATION, CONTACT AND ABOUT US



## Environmental report

The next consolidated Environmental Report will be submitted for review in October 2025 and published thereafter. In addition, an updated version is created, externally reviewed and published on an annual basis.

## Certified environmental experts

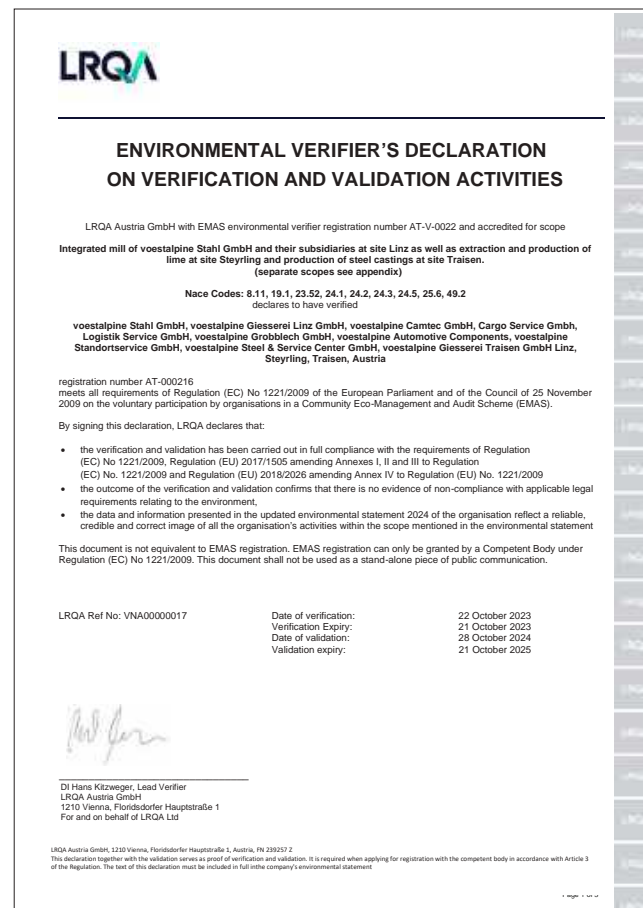
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The Linz, Steyrling and Traisen locations have established independent environmental management systems. The public is informed of the environmental measures taken at these locations in compliance with the community systems for environmental management and environmental impact assessment.

**Registry number: AT-000216**

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**voestalpine**

ONE STEP AHEAD.