ENVIRONMENTAL REPORT 2023

Updated environmental report for the Linz, Steyrling and Traisen locations

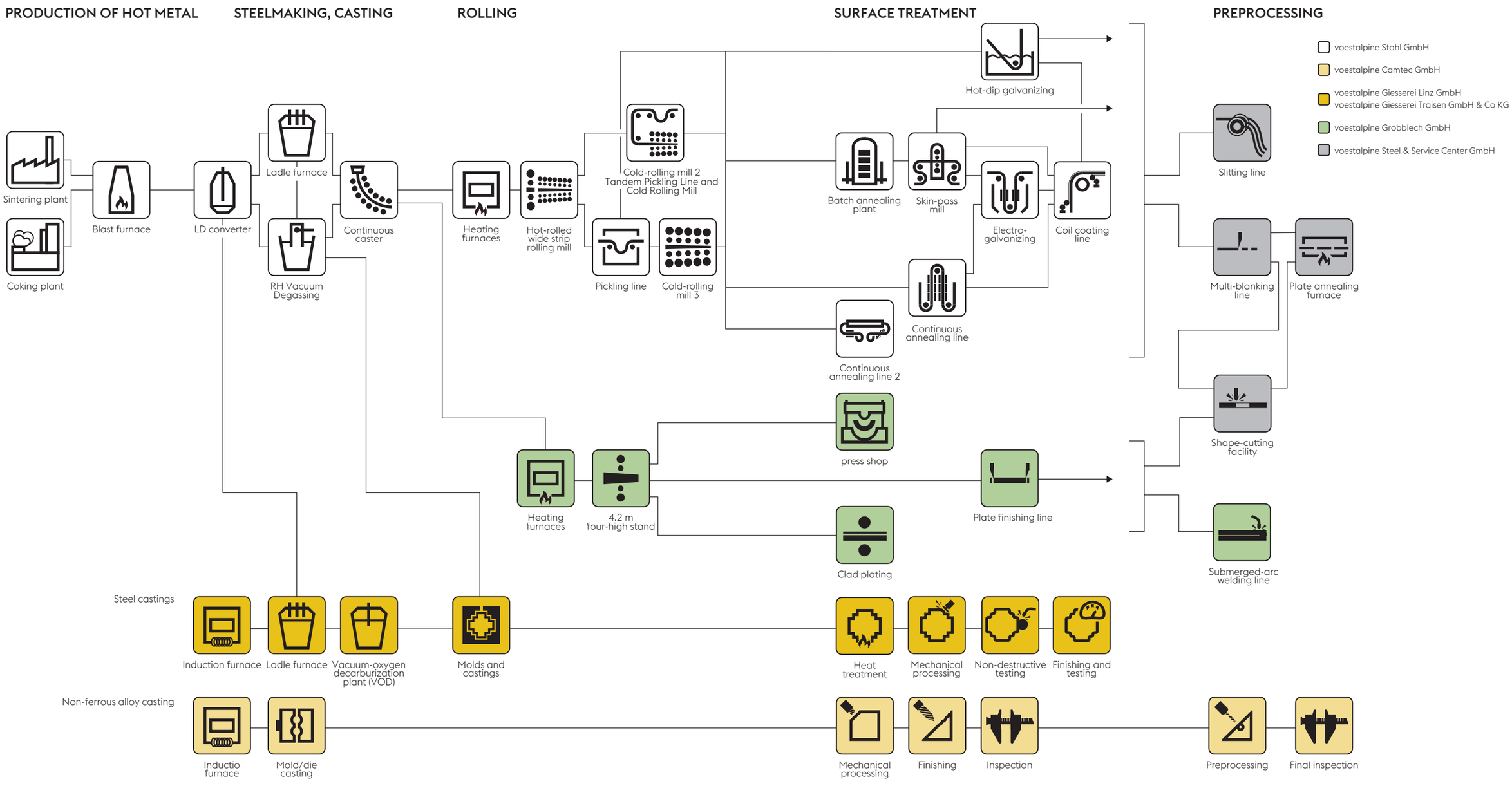
voestalpine Steel Division
www.voestalpine.com/steel

voestalpine
ONE STEP AHEAD.

CONTENT

The content of the updated Environmental Statement 2023 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 & 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 2023.
This document is a translation of the validated German document.

PRODUCTION PROCESSES



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 decarbonization plant (AOD).

Strip and heavy plate products are made from the cast slabs the 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 Standortservice GmbH at the Linz site provide support for the entire process.

CLIMATE PROTECTION MEASURES

Protection of the environment and reduction of CO_2 emissions are a central priority at voestalpine. This is why an ambitious company program is now being implemented step by step with greentec steel.

The greentec steel climate action program

The supervisory board of voestalpine AG gave the green light in March 2022 for preparatory work on climate-friendly steel production at the Linz and Donawitz sites. This work has been continually underway ever since.

The Supervisory Board had generally approved in March 2023 an investment volume of roughly 1.5 billion euros for the construction of two electric-arc furnaces (EAFs).

The plan is to replace two coal-based blast furnaces with the new furnaces that operate using green electricity. A mix of 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 percent of the company with purchase agreements that have been secured for the long term.

The decision on the systems and suppliers will be made in 2023, and construction will commence in 2024. Startup is scheduled for 2027. This means that 2.5 million tons of CO_2-reduced steel can be produced annually, reducing emissions at both sites by 30 percent and corresponding to 5% of the total current CO_2 emissions in Austria. This makes greentec steel by far the largest single climate protection lever in Austria. The first step in the project still depends on clarification of open funding issues with the federal government and the power grid upgrade (220 kV line in the central region of Upper Austria), which is scheduled to take place by the end of 2026 at the latest.

The long-term approach of voestalpine to net-climate-neutral production by 2050 at the latest, in line with the EU emissions trading targets, 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 the corresponding infrastructures.

Overview of key elements and milestones in the greentec steel program

» **Reduction in CO_2 emissions by 30% from 2027**
Replacement of two coal-based blast furnaces in Linz and Donawitz, each with one electric arc furnace powered by renewable electricity.

» **Reduction in CO_2 emissions by 50% from 2030**
Replacement of additional hot metal production at both sites.

» **Net zero CO_2 emissions by no later than 2050**
Options such as the use of fossil-free energy sources, including green hydrogen, bioenergies and CO_2 capture (CCUS) with the aim of maximum flexibility with 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_2 certificates

The renewed increase in costs from the EU emissions trading scheme is reflected, among other things, in higher environmental expenditures.

The certificate price increased by 17.01% to EUR 89.24 in the course of the 2022/23 financial year (2021/22: EUR 76.27). As a result of persistently volatile price trends, the EUR 100 mark was even exceeded for a short time in February 2023.

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 2022/23 financial year, this accounted for roughly one third of the total carbon emissions as compared to the average of previous years.

Corporate environmental measures

In the past financial year, voestalpine launched a Group-wide expansion campaign for the production of renewable energy. This includes the installation of photovoltaic systems on building structures and open spaces as well as investment in wind and hydropower. The erection of electric charging stations is also being promoted in European locations. In addition to the preparatory work for greentec steel, the Steel Division has also focused on further objectives such as energy efficiency in terms of reducing specific consumption; self-generation of renewable energies through expansion of photovoltaic systems; and finally a further increase in the share of e-mobility both in factory transports and loading infrastructures for voestalpine employees. One focus was on further expansion of the carbon-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. Optimization of the production route, for example by the use of scrap and reduction agents as well as the use of renewable electricity, these products have a roughly 10% lower carbon footprint. In addition to the automotive industry, greentec steel is also already used by customers in facade construction, building technologies, crane construction as well as the heating and heat pump industries.

Product sustainability

The aim of the voestalpine Group to reduce direct greenhouse gas emissions in production (Scope 1) is augmented by the ambitious objectives of reducing Scope 2 (energy procurement) and Scope 3 emissions (raw materials, transports etc.). Since July 2022, the Group has participated in the independent Science-Based Targets Initiative (SBTi): This includes scientific-criteria-based assessment, review and validation of the business plans with a view to their compatibility with the Paris objective.

The voestalpine focus in determining the sustainability of products (Product Sustainability) over the entire value-added and process chain is currently on ecological aspects: The focus is on the analysis of the environmental impact of products and the goal of decarbonization. A central element and methodological tool in this context is the lifecycle assessment (LCA). This requires uniform, robust and globally comparable methods to contribute to a level playing field on an international level and to 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.

voestalpine has listed and published environmental product declarations for various products using the declaration scheme of the Institut Bauen und Umwelt e.V. (IBU). These include hot-rolled steel strip, hot-dip galvanized steel strip, hot-pressed steel components, prestressed concrete railroad switch ties, rails and seamless tubes. EPDs for other voestalpine products are currently being prepared. Please find more details in the Product Sustainability section in this Environmental Report.

EU LIGHTHOUSE PROJECT H2FUTURE – GREEN HYDROGEN

Sufficient and stable availability of green hydrogen on a large scale is one of the basic prerequisites for the long-term development of hydrogen-based breakthrough technologies in CO_2-minimized steel production.

The EU lighthouse project H2FUTURE is investigating the possibility of producing green hydrogen, which is hydrogen produced using renewable electricity. The project is also researching possible applications in steel production. Central issues such as the sector coupling of energy and industry as well as the broad transferability of technologies at the EU level for the steelmaking industry as well as for other industrial sectors that could use hydrogen in their own production processes. The project is making an important contribution to the long-term decarbonization of energy-intensive industries in Europe.

One of the world's largest pilot plants has now been built at the Linz site of voestalpine for the generation of green hydrogen with proton exchange membrane (PEM) electrolysis technology on an industrial scale with a production capacity of 1200 m^3/hour and for the provision of network-related services sponsored by the fuel cells and hydrogen joint undertaking. The plant will go into operation in the fall of 2019.

2022/23 ENVIRONMENTAL PROGRAM
IMPLEMENTED MEASURES

Essential environmental measures that have made a significant contribution to environmental performance are integral constituents of the environmental programs of companies included in the scope. 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	Deadline
voestalpine Stahl GmbH	Avoidance of compressed air losses in continuous casting lines	Installation of selective sensor technology and plausibility check in the automation system for immediate alarming of excess consumption	Reduction of compressed air by 8 kWh/year RESULT: Reduction achieved of 8 million m^3/year	03/31/2023
voestalpine Stahl GmbH	Reduction of fuel input in annealing	Replacement of old annealing hoods with new ones	Burner gas consumption reduced by 600 MWh/year RESULT: Reduction achieved of 928 MWh/year	12/31/2022
voestalpine Stahl GmbH	Reduction of energy input in sulfuric acid production in the coal by-product plant	Installation of a retaining ring for improved droplet separation and installation of a drain line	Required refrigeration energy reduced by roughly 415 MWh/year RESULT: Reduction achieved of 415 MWh/year	03/31/2023
voestalpine Stahl GmbH	Avoidance of fugitive dust emissions in the casting bay of Blast Furnace A	Installation of condition monitoring system to increase blower availability	Achievement of blower availability of >99.7% RESULT: Total availability was achieved (in the defined evaluation period) of 99.87%.	09/30/2022
voestalpine Stahl GmbH	Reduction of fugitive dust emissions during coke pressing process	Optimization of the coke cake guide carriages and improved dust collection in the coke transfer machines	Reduction of approximately 6 t of dust per year RESULT: Result: Reduction of roughly 6.4 tons of dust per year	12/31/2022
Steyrling location	Reduction of NOx emissions during raw material extraction	Replacement of two old excavators of Exhaust Gas Class III with two new pieces of equipment of Exhaust Gas Class V Replacement of the transport truck and crane work of Euro Class 2 with a new truck of Euro Class 6	Reduction of NOx emissions, average operating hours of roughly 1,450 kg/year RESULT: Reduction of 1,497 kg NOx achieved per year	03/31/2023
voestalpine Grobblech GmbH	Reduced energy consumption in heating units	Investment in a chamber furnace and optimization of the operation modes of the pusher-type furnaces (relocation of thick plating units to chamber furnace and thus optimizing the operation mode in pusher-type furnaces 1 and 2)	Natural gas consumption reduced by roughly 4,600 MWh/year and coke gas consumption by roughly 4,900 MWh/year RESULT: Total savings of 7,200 MWh/a were achieved (coke oven gas + natural gas).	03/31/2023
voestalpine Grobblech GmbH	Optimized energy consumption in heating units	Replaced recuperator in pusher-type furnace 1	Coke gas consumption reduced by roughly 5,800 MWh/year and CO_2 by roughly 390 tons per year RESULT: Savings of coke oven gas achieved of 5,800 MWh/year	03/31/2023
voestalpine Camtec GmbH	Reduction of lead-containing products	Contact customers with the products in question and offer alternative materials	Reduction of lead-containing products with more than 0.1% by mass by 70% RESULT: Reduced by 77.4%	03/31/2023
voestalpine Steel & Service Center GmbH	Reduction of natural gas consumption in the shape-cutting facility	Renewal of existing furnace insulation (new sealing lid lip) and replacement of existing gas burners with more efficient technology	Reduction of steam consumption by roughly 20% = 72 MWh RESULT: Reduction achieved of 22% = 80 MWh	03/31/2023
voestalpine Steel & Service Center GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Expansion of the 1,011 kWp photovoltaic system on the building roof of the shape cutting center	Generation of roughly 1,413 MWh of green electricity in the shape-cutting facility RESULT: 1,410 MWh were generated	03/31/2023
voestalpine Steel & Service Center GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 910 kWp photovoltaic system on the building roofs at the Industriezeile site	Generation of roughly 857 MWh of green electricity at the Industriezeile site RESULT: 857 MWh were generated	03/31/2023
voestalpine Steel & Service Center GmbH	Reduction of energy use in the slitting line – Section 1	New insulation of the production facility roofs above the slitting lines	Natural gas reduced by roughly 7% = 310 MWh/year RESULT: Reduction achieved of 310 MWh	03/31/2023
Logistik Service GmbH	Reduced consumption of diesel fuel on the works railway	Procurement of one new diesel locomotive with start-stop technology (1004.07 series)	Savings of roughly 800 liters of diesel per year per locomotive RESULT: Reduction achieved of 5,200 liters per year	03/31/2023
Cargo Service GmbH	Reduced railway electricity consumption	Train line to Italy: Heavy-duty trains between Bischofshofen and Tarvisio resulting in a reduced number of rounds with unchanged shipment quantities	Savings of roughly 68 trains with unchanged net tonnage shipped RESULT: This change in the railway strategy has saved 52 train runs (260,728 kWh)	03/31/2023
voestalpine Standortservice GmbH	Pollutant emissions reduced in emergency vehicles	Replacement of two emergency vehicles powered by internal combustion engines with two powered by electric motors	Savings of approximately 800 liters of light petroleum distillate per year RESULT: Reduction achieved of 3,179 liters of petrol per year and 1,043 liters of diesel per year	03/31/2023
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 1.9 GWh of green electricity RESULT: Green electricity amounting to 1.9 GWh has been purchased.	05/01/2022

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^2.

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. 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^3 to an average of < 50 mg/m^3
- **Phase separation**
  Pollutant concentration (BTEX and PAH) in the extracted groundwater reduced by > 99.9%

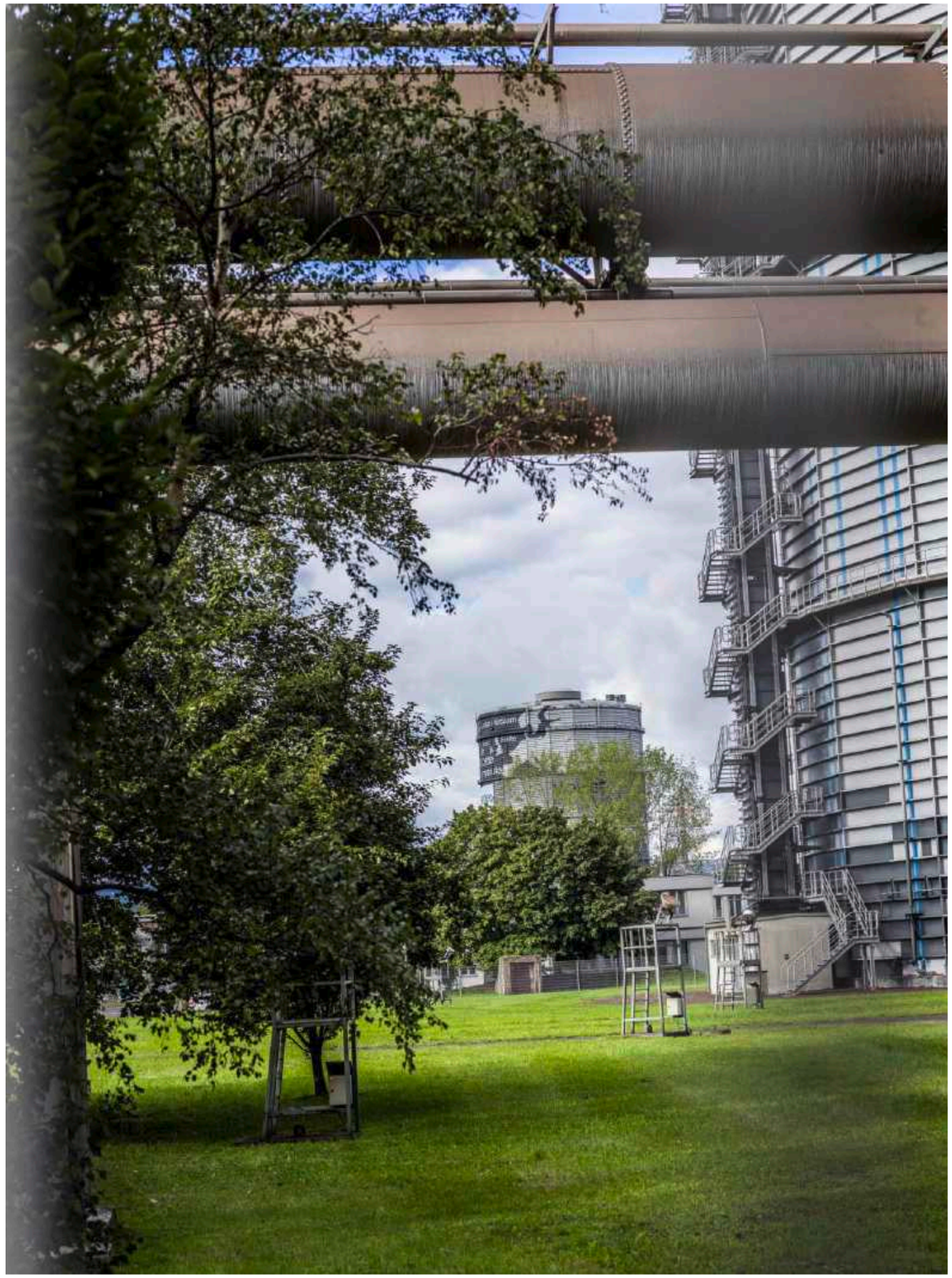
The funnel-and-gate system and soil vapor extraction continue to operate to maintain protection.

2022/23 ENVIRONMENTAL PROGRAM NEW MEASURES

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	03/29/2024
voestalpine Stahl GmbH	Reduction of energy consumption by switching to LED technology for high-level hall 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	Reduced by roughly 2,650 MWh/year	06/01/2024
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	Reduction of natural gas by 1,195 MWh/year	12/31/2023
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	05/31/2023
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	03/31/2024
voestalpine Stahl GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 50 kWp photovoltaic kWp on Office Building 75	Generation of roughly 47 MWh of green electricity	03/31/2024
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	03/31/2024
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	Reduction of approximately 30 t of dust per year	12/31/2024
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^2 roof area with seepage into the subsurface	12/31/2026
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	03/31/2024
voestalpine Grobblech GmbH	Optimized energy consumption in heating units	Replaced recuperator in pusher-type furnace 2	Coke gas consumption reduced by roughly 1,100 MWh/year and CO_2 by roughly 218 tons per year	03/31/2024
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	03/31/2024
voestalpine Giesserei Linz GmbH	Reduced energy consumption in the heat treatment system	Conversion from natural gas/air to natural gas/oxygen combustion	Consumption of propane gas reduced by roughly 2,600 MWh/year	03/31/2024
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	03/31/2024
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	Consumption of propane gas reduced by roughly 3,000 MWh/year	06/30/2023
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	03/31/2024
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 tons per year	03/31/2024

2022/23 ENVIRONMENTAL PROGRAM NEW MEASURES

Company	Target	Task	Figure	Deadline
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	03/31/2024
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	Electrical power consumption reduced by 100 MWh/year = 6% of the overall goal	03/31/2024
voestalpine Steel & Service Center GmbH	Reduction of energy use in the slitting line – Section 2	New insulation of production building roofs	Natural gas reduced by roughly 3% = 160 MWh/year	03/31/2024
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	03/31/2024
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)	Savings of roughly 5,225 liters of diesel per year per locomotive	03/31/2024
Cargo Service GmbH	Reduction of diesel fuel	Use of electric traction units instead of diesel traction units in container transport in the Linz harbor	Reduction of roughly 60,000 liters of diesel fuel per year	03/31/2024
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	03/31/2024
voestalpine Automotive Components Linz	Reduction of energy use in Works 1 and 2	Cycle control in production facilities, including remote control of heating system	Consumption of electricity reduced by roughly 110 kWh/year	05/31/2023
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	Consumption of electricity reduced by roughly 5,096 kWh/year	05/31/2023
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	03/31/2024



2022/23 ENVIRONMENTAL PROGRAM MEASURES BEING IMPLEMENTED

Company	Target	Task	Figure	Deadline
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 tube consumption reduced by roughly 270 units per year	03/31/2024 Extension
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 increased from 4.5 kg/ton of crude steel to 6.5 kg/ton of crude steel	12/31/2023 Extension
voestalpine Stahl GmbH	Reduction of clean water consumption in the steelmaking plant	Technical improvement and pressure reduction in pure water cooling of lances	Reduction of 570 Tm^3 per year of pure water and 470 MWh/year of electrical energy in pump output	12/31/2023
voestalpine Stahl GmbH	Optimization of utilization of converter gas from the steelmaking plant	Converter gas utilization increased by means of fast CO analysis	Reduction of annual energy consumption by 7,700 MWh for natural gas and by roughly 1,500 tons for CO_2	12/31/2024 Extension
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 tons per year for process water	12/31/2024 Extension
voestalpine Stahl GmbH	Reduction of storm water discharged into the sewer system and increased amount of water in the area of new development	New construction of Steel Center East of BG28 with infiltration shafts for infiltration of roof water and infiltration swales for infiltration of road surface water	Precipitation from an area of roughly 2,800 m^2 is infiltrated into the subsoil and remains in the natural cycle (instead of precipitation water discharged into the sewer system)	12/31/2023 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 per year	12/31/2023 Extension
voestalpine Stahl GmbH	Reduction of precipitation discharged into sewage system and increase in quantity of underground water by 10,100 m^3/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 an infiltration system	12/31/2023 Extension
voestalpine Giesserei Linz GmbH	Reduction of specific water consumption	Project for the optimization of cooling water consumption	Reduction of specific water consumption (below 420 m^3/ton)	03/31/2025 Extension
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	04/30/2024 Extension
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% per year and specific energy consumption by 10% per year	04/30/2023 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	04/30/2023 Extension
voestalpine Steel & Service Center GmbH	Reduced steam consumption	Installation of a central heating regulation system in the slitting facility	Reduction of steam consumption by roughly 12% = 800 MWh/year	03/31/2024 Extension
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 kWp photovoltaic system on the building roofs in Works 1	Generation of roughly 1.7 GWh of green electricity in Work 1	05/31/2023 Extension
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 in Works 2	Generation of roughly 707 MWh of green electricity in the Works 2	12/31/2023 Extension

2022/23 ENVIRONMENTAL PROGRAM MEASURES NOT IMPLEMENTED

Company	Target	Task	Figure	Deadline
voestalpine Stahl GmbH	Calorific power reduction in MGST1 from 1.27 kWh/Nm^3 to 1.24 kWh/Nm^3 with a resulting reduction in natural gas consumption	Optimized operation of Mixed Gas Station 1 and 8-meter blast furnace through regulation of calorific power	Reduction of natural gas by roughly 43,200 MWh/year and about 4,700 tons of CO_2 per year (simultaneous increase in electricity purchased from external sources) RESULT: The measure was not implemented because of changes in general conditions	03/31/2022

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	2020 CY	2021 CY	2022 CY
Crude steel (CS)	Million tons	5.05	5.66	5.40

Products	Unit	2020 CY	2021 CY	2022 CY
Hot-rolled strip (non-slit)	Million tons	0.975	1.135	1.080
Cold-rolled strip and electrical steel		0.935	1.025	0.885
Galvanized strip		1.991	2.128	2.038
Organic-coated strip		0.181	0.192	0.174
Heavy plates		0.4	0.5	0.6
Blast furnace slag		1.2	1.3	1.2
Castings in Linz	tons	4,985.0	4,777.0 [1]	5,781
Camtec castings		62.0	61.0	69.0
Laser-welded blanks		137,821	139,161.3	116,822
Products processed by SSC	units	1,618,119	1,928,660	1,770,869

Energy	Unit	2020 CY	2021 CY	2022 CY
Natural gas	TWh	3.22	3.17	2.94
Electric power (outside source)	TWh	0.384	0.596	0.582

Steyrling location

Products	Unit	2020 CY	2021 CY	2022 CY
Burned lime (BL)	Million tons	0.301	0.328	0.339
Armor stones		0.004	0.002	0.004
Fines (unburned)		0.669	0.646	0.696
Volume of limestone mined (LS)		1.214	1.214	1.341

Energy	Unit	2020 CY	2021 CY	2022 CY
Natural gas	GWh	327	321	333
Electric power		12	13	13

Traisen location

Production volume	Unit	2020 CY	2021 CY	2022 CY
Cast parts	tons	4,432	5,202 [2]	4,564
Cast parts	units	18,825	25,279.0	21,671

[1] Value was updated (reduced by 26 tons).
[2] 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 30 and 31).

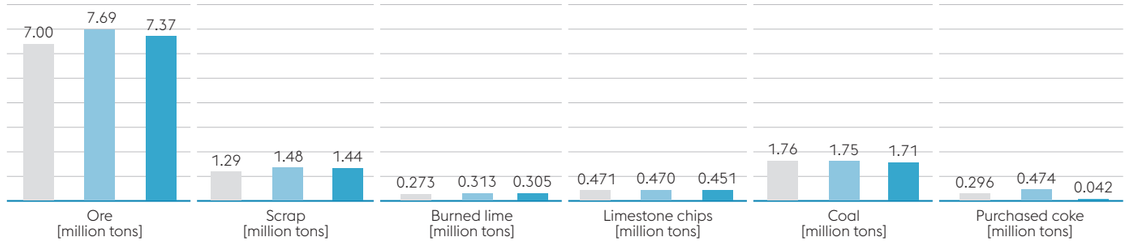
CORE INDICATORS
AT THE LINZ LOCATION

The core indicators refer to total annual crude steel production. In the 2022 calendar year, the value was 5.40 million tons. In 2020 it was 5.05 million tons, and in 2021 it was 5.66 million tons.

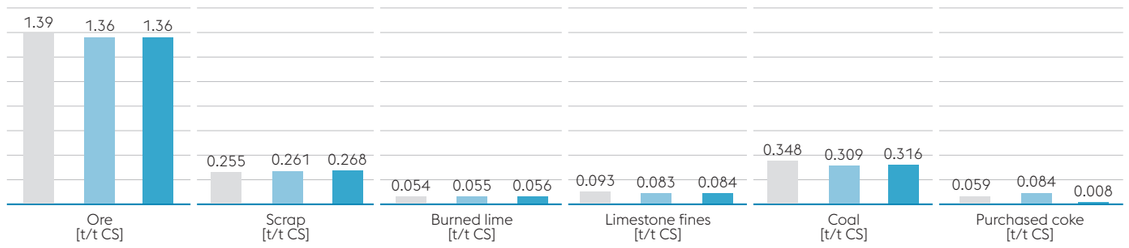
MATERIAL EFFICIENCY

2020 2021 2022

Absolute volume



Specific volume

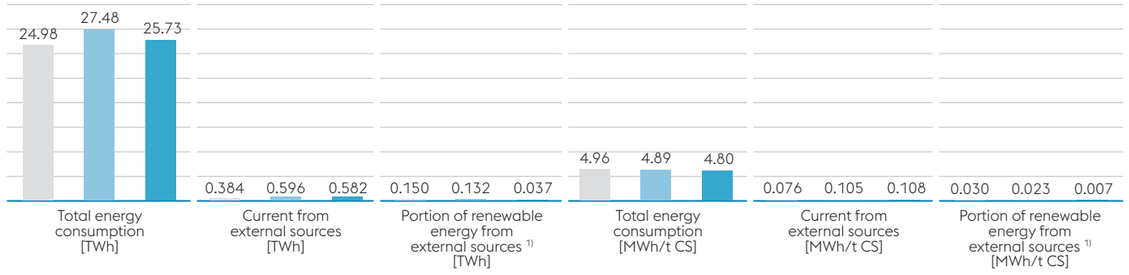


ENERGY EFFICIENCY

2020 2021 2022

Absolute volume

Specific volume

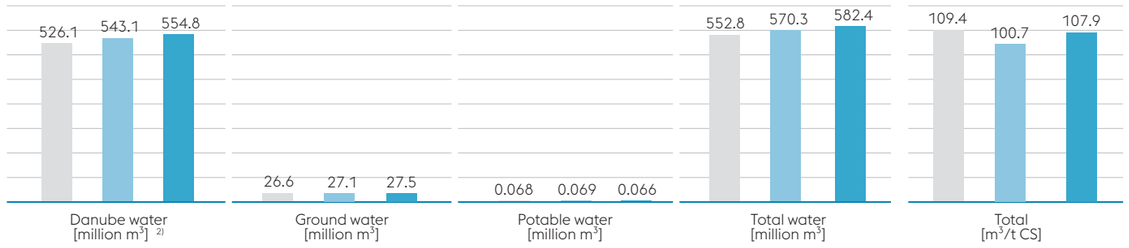


WATER

2020 2021 2022

Absolute volume

Specific volume

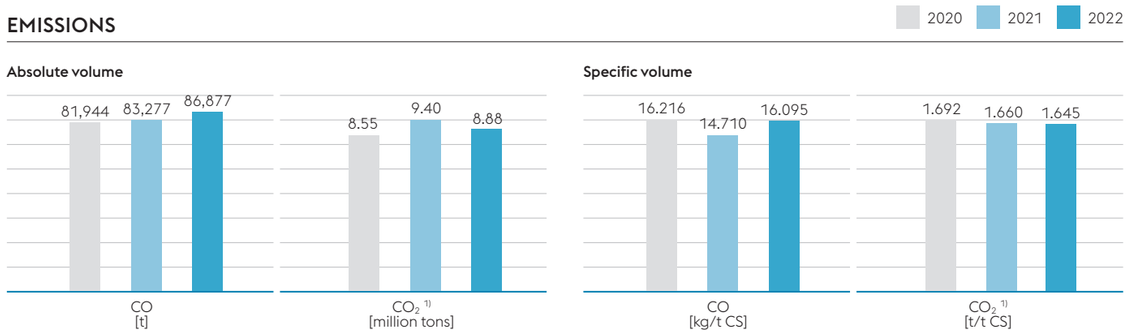


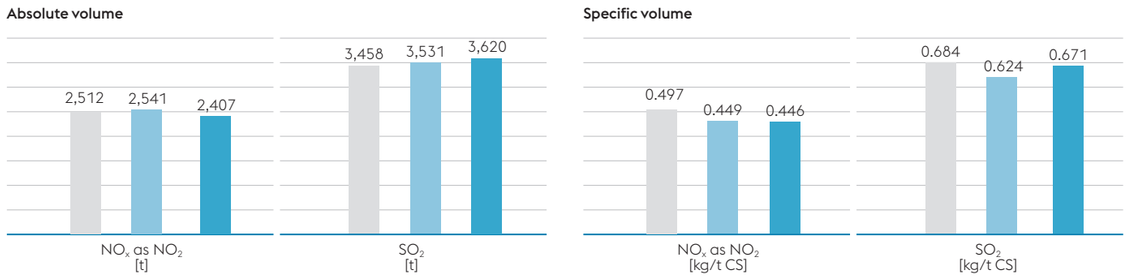
1) Increased proportion of renewable energies with respect to electricity labeling from purchased third-party electricity For the 2022 calendar year, the following percentages were recorded: Wind energy (2.73%), solid biomass (2.21%), Photovoltaics energy (1.13%), miscellaneous ecological energy (0.29%)

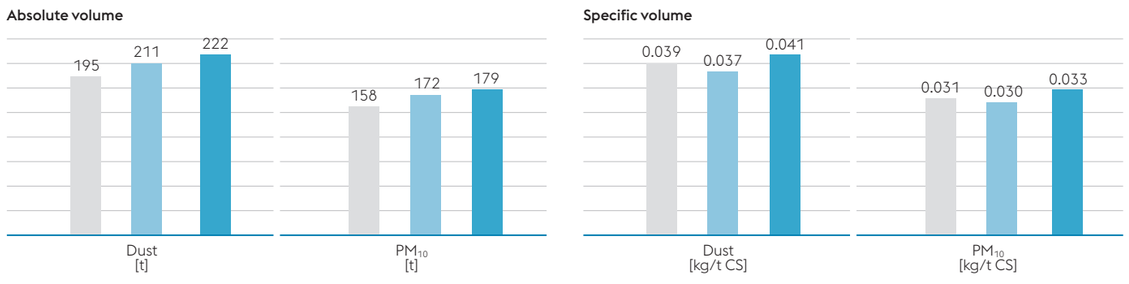
2) Limit value: 720 million m³/year

CORE INDICATORS AT THE LINZ LOCATION

EMISSIONS



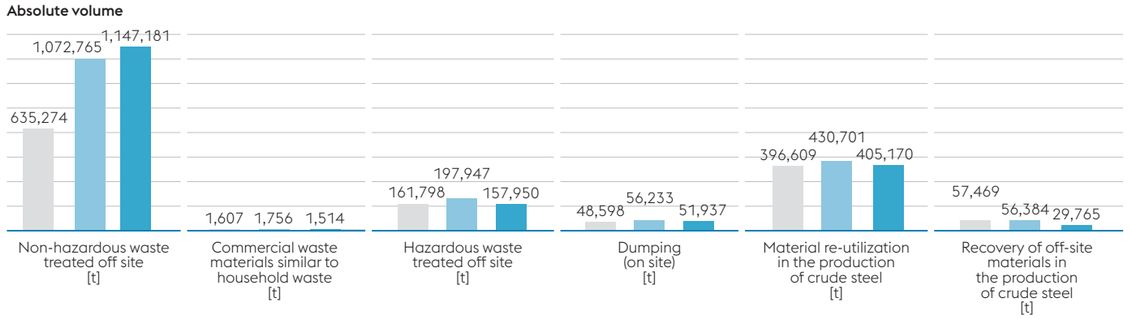


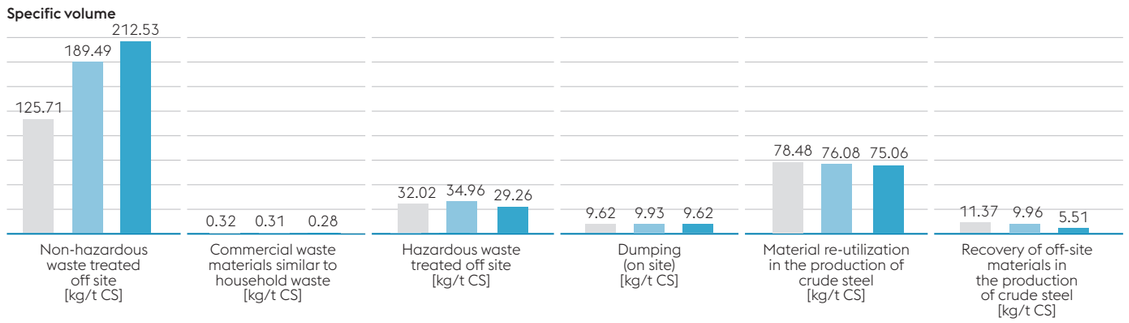


Other greenhouse gases such as methane and substances that deplete the ozone layer are emitted in only small amounts (roughly 163 tons of methane and 80 kg of substances that deplete the ozone layer).

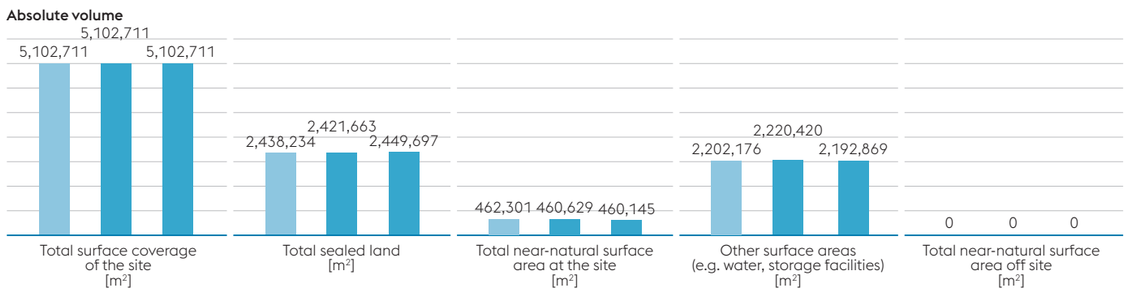
1) Verified volume under EU emissions allowance trading, Attachment I (direct emissions)

WASTE





BIOLOGICAL DIVERSITY 2)



2) 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 December 2022 and is the actual value.

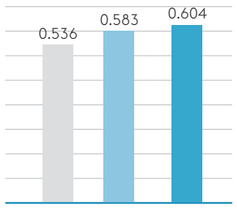
CORE INDICATORS
AT THE STEYRLING LOCATION

The core indicators refer to total annual burned lime production. In the 2022 calendar year, the value was 0.34 million tons. In 2020 it was 0.30 million tons, and in 2020 it was 0.33 million tons.

MATERIAL EFFICIENCY

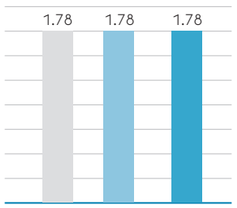
2020 2021 2022

Absolute volume



Limestone for the production of burned lime [million tons]

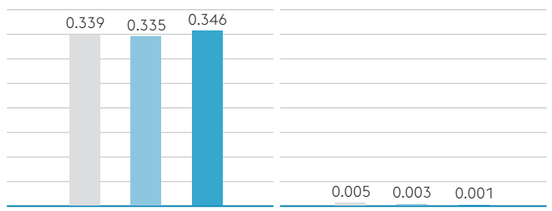
Specific volume



Limestone for the production of burned lime [t/t BL]

ENERGY EFFICIENCY

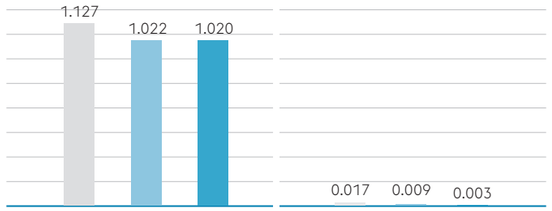
Absolute volume



Total energy consumption [TWh]

Portion of renewable energy from external sources [1] [TWh]

Specific volume

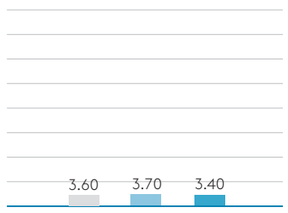


Total energy consumption [MWh/t BL]

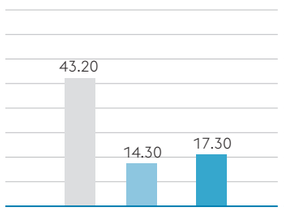
Portion of renewable energy from external sources [1] [MWh/t BL]

EMISSIONS

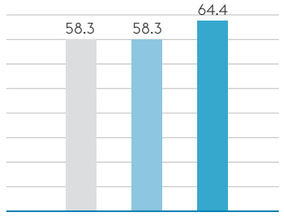
Absolute volume



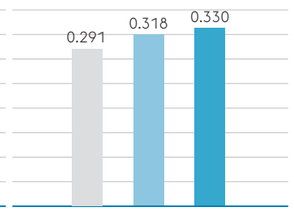
Dust [t]



NO_x as NO_2 [2] [t]

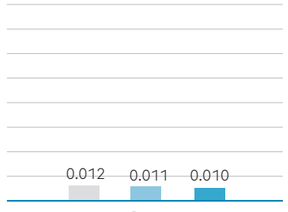


Diffuse dust emissions PM_{10} [t]

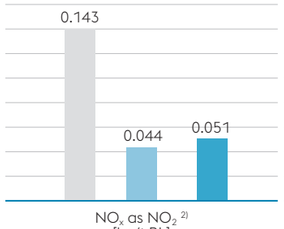


CO_2 [3] [million tons]

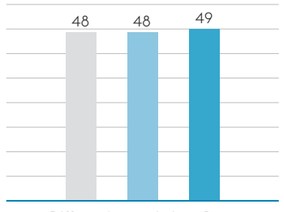
Specific volume



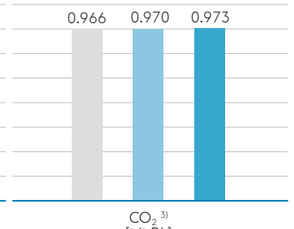
Dust [kg/t BL]



NO_x as NO_2 [2] [kg/t BL]



Diffuse dust emissions PM_{10} [g/t LS]

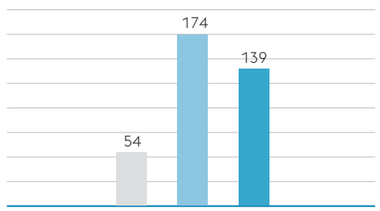


CO_2 [3] [t/t BL]

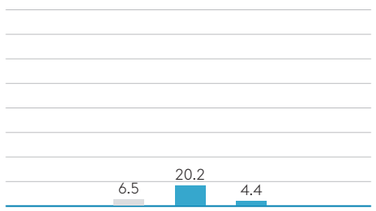
WASTE

2020 2021 2022

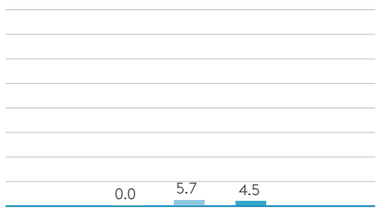
Absolute volume



Non-hazardous waste treated off site [t]

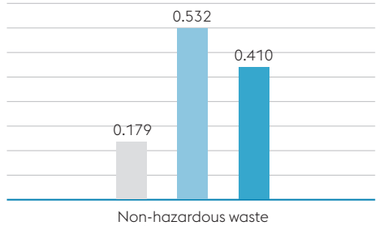


Hazardous waste treated off site [t]

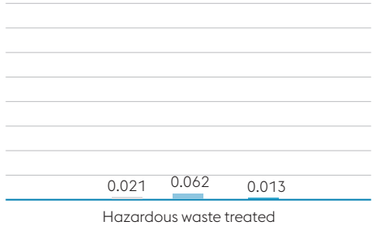


Material re-utilization in the production of crude steel [4] [t]

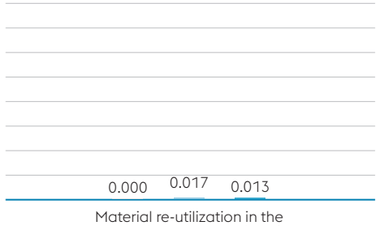
Specific volume



Non-hazardous waste treated off site [kg/t BL]



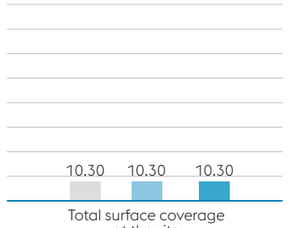
Hazardous waste treated off site [kg/t BL]



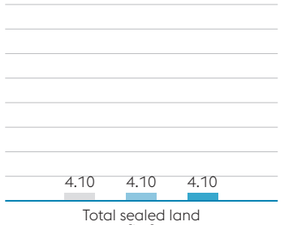
Material re-utilization in the production of crude steel [4] [kg/t BL]

BIOLOGICAL DIVERSITY [5]

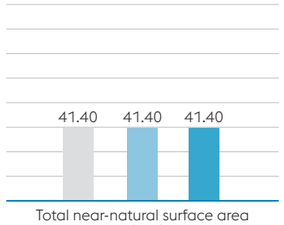
Absolute volume



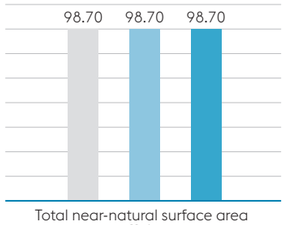
Total surface coverage at the site [ha]



Total sealed land [ha]



Total near-natural surface area at the site [ha]



Total near-natural surface area off site [ha]

[1] Increased proportion of renewable energies with respect to electricity labeling from purchased third-party electricity For the 2022 calendar year, the following percentages were recorded: Wind energy (2.73%), solid biomass (2.21%), Photovoltaics energy (1.13%), miscellaneous ecological energy (0.29%).
[2] EmEmissions from lime furnaces
[3] Verified volume under EU emissions allowance trading, Attachment I (direct emissions)
[4] Material recycling at the Linz location
[5] The core biological diversity indicator refers to the surface of the works premises at the Steyrling location the land registry in December 2022 and is the actual value.

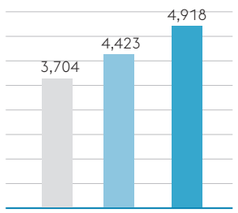
CORE INDICATORS
AT THE TRAISEN LOCATION

The core indicators refer to total annual casting production. In the 2022 calendar year, the volume was 4,564 tons. In 2020 it was 4,432, and in 2020 it was 5,202 tons.

MATERIAL EFFICIENCY

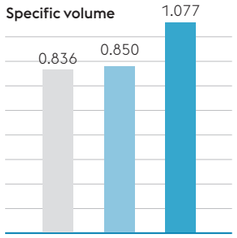
2020 2021 2022

Absolute volume



Scrap, including recycled scrap [t]

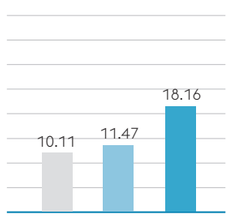
Specific volume



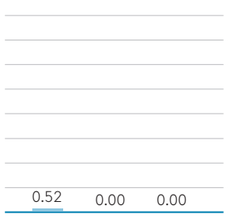
Scrap, including recycled scrap [t/t casting]

ENERGY EFFICIENCY

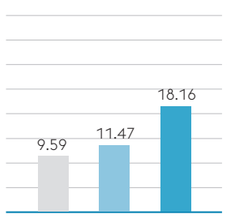
Absolute volume



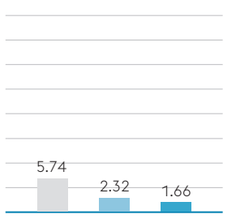
Total electrical power consumption [GWh]



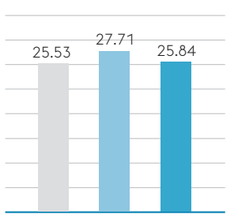
Electric power generation [1] [GWh]



Purchased electric power [GWh]

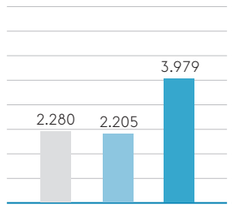


Portion of renewable energy from external sources [2] [GWh]

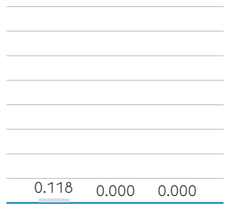


Gas consumption [GWh]

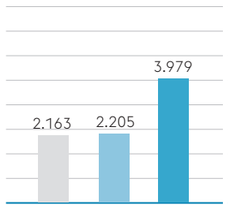
Specific volume



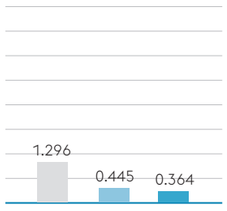
Total electrical power consumption [MWh/t casting]



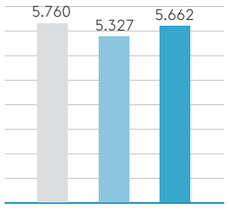
Electric power generation [1] [MWh/t casting]



Purchased electric power [MWh/t casting]



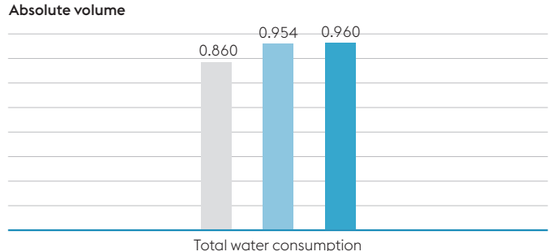
Portion of renewable energy from external sources [2] [MWh/t casting]



Gas consumption [MWh/t casting]

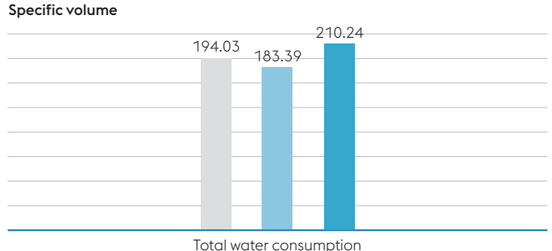
WATER

Absolute volume



Total water consumption [million m³]

Specific volume



Total water consumption [m³/t casting]

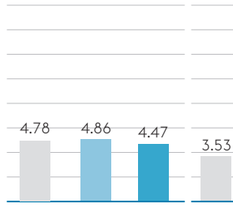
[1] In-house power generation was completely outsourced

[2] Increased 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 2022 calendar year.

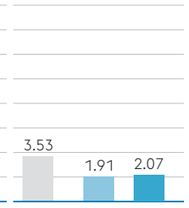
EMISSIONS

2020 2021 2022

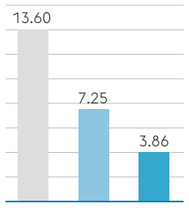
Absolute volume



Dust [3] [t]

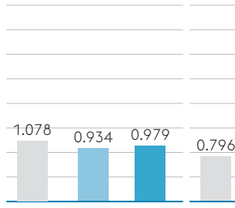


NO_x as NO_2 [3] [t]

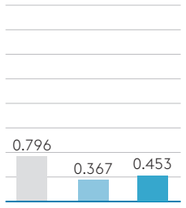


Corg [4] [t]

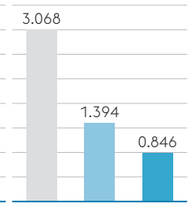
Specific volume



Dust [2] [kg/t casting]



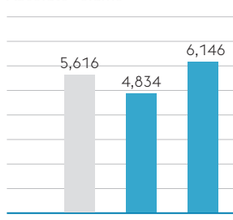
NO_x als NO_2 [3] [kg/t casting]



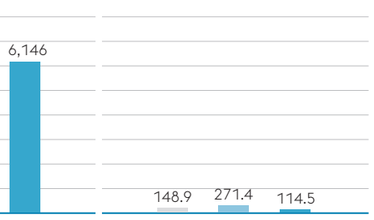
Corg [4] [kg/t casting]

WASTE

Absolute volume

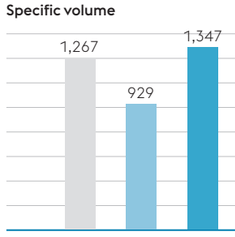


Non-hazardous waste treated off site [t]

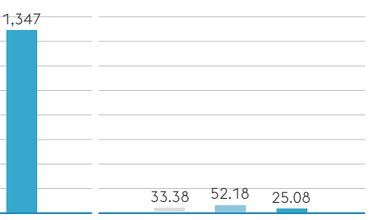


Hazardous waste treated off site [t]

Specific volume



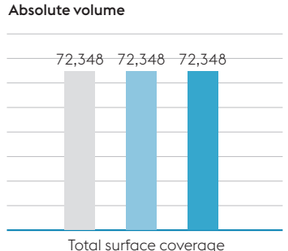
Non-hazardous waste treated off site [kg/t castings]



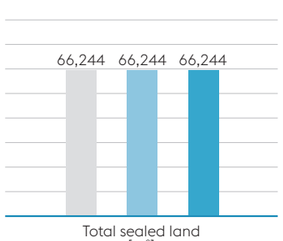
Hazardous waste treated off site [kg/t castings]

BIOLOGICAL DIVERSITY [5]

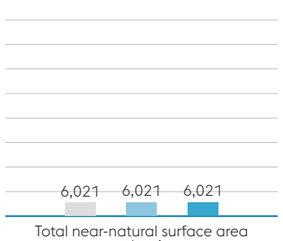
Absolute volume



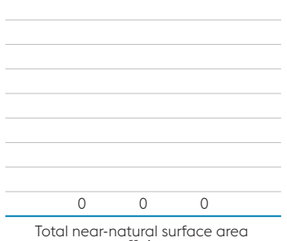
Total surface coverage of the site [m²]



Total sealed land [m²]



Total near-natural surface area at the site [m²]



Total near-natural surface area off site [m²]

[3] Emissions from production systems

[4] Emissions from the annealing furnace/bogie hearth furnace

[5] The core biological diversity indicator refers to the surface of the works premises at the Traisen location in the land registry in December 2022 and is the actual value.

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_2 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 sustainability, the voestalpine focus 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 the 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.

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_2-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_2-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_2 Reduced Steel project at the Linz site. The aim is to reduce direct CO_2 emissions in existing steelmaking processes. The environmental impact of products manufactured in this process, in particular carbon footprint, is determined and reported based on lifecycle assessments based on internationally recognized methods and standards.

Sustainable and decarbonized products play an increasingly important role in supply and value chains. It is absolutely necessary to create uniform definitions, methodologies and framework conditions for a level playing field in the international competition for so-called sustainable products.

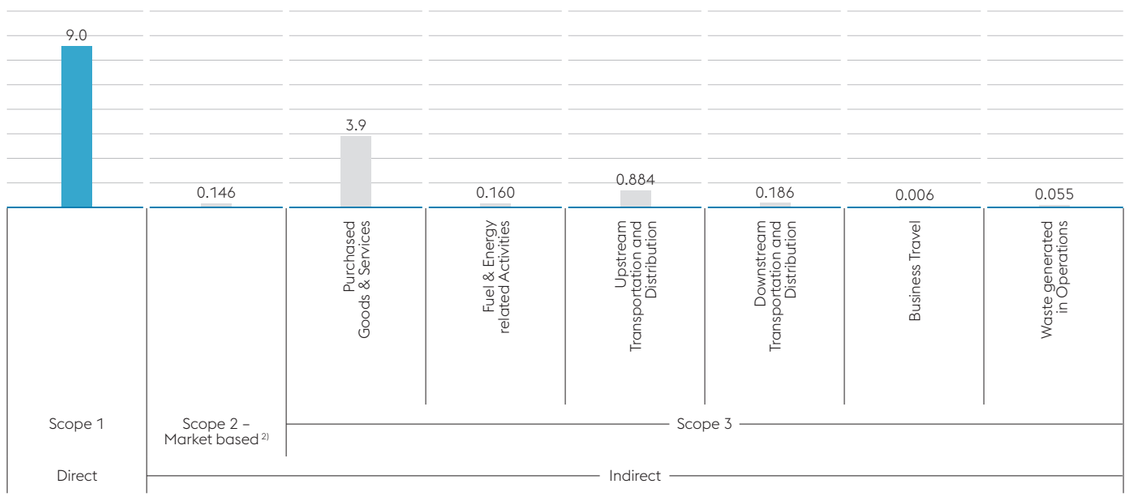
The voestalpine Group provides information on the environmental impact of its products in the form of environmental product declarations and, in the interest of transparency, also publishes data on greenhouse gas emissions and water consumption as part of the Carbon Disclosure Project (CDP). The voestalpine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

DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS IN 2022

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 14064-3 and verified externally[1]. The greenhouse gas emissions at the Linz, Steyrling and Traisen sites are as follows:

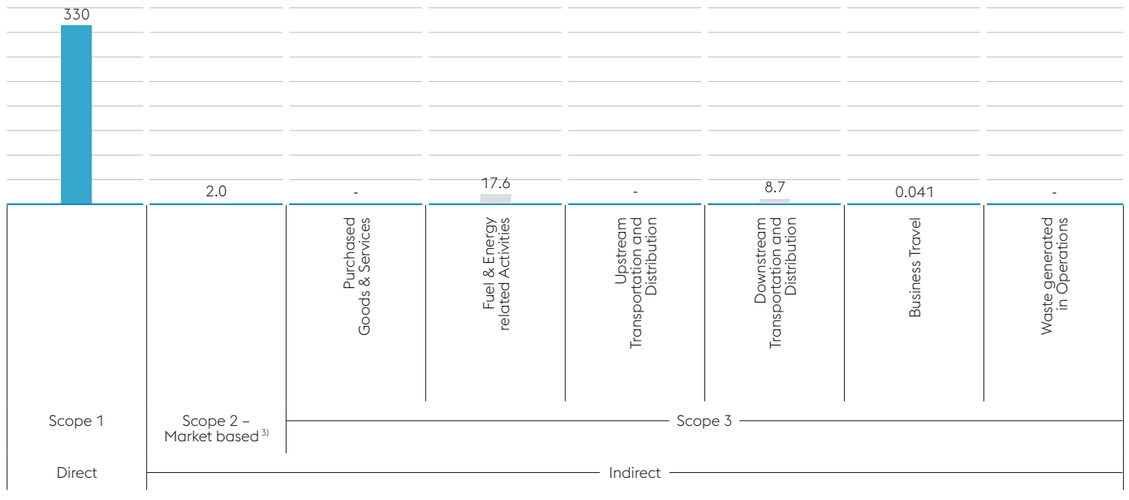
DIRECT AND INDIRECT GHG EMISSIONS AT THE LINZ SITE

in [million tons CO_2e] (CO_2 equivalent)



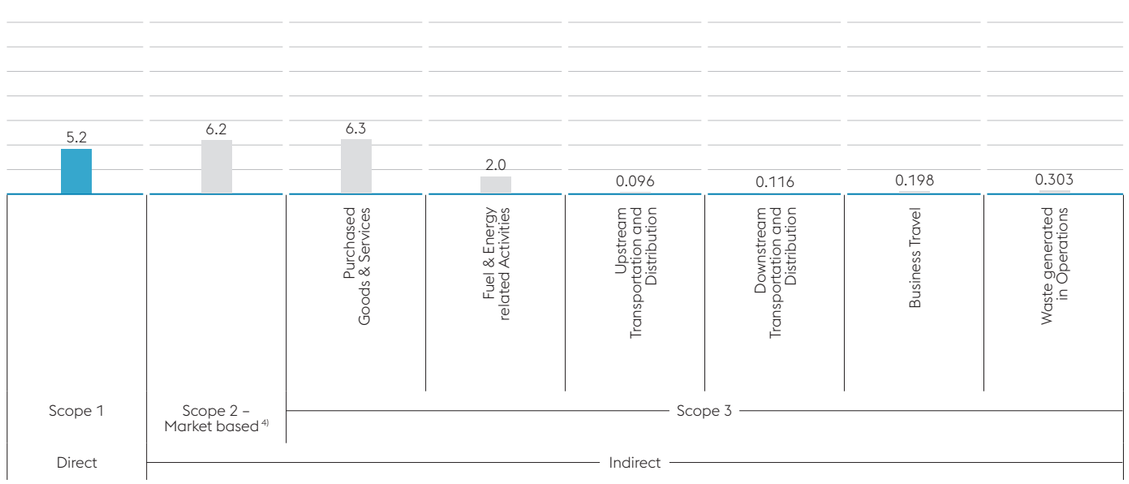
DIRECT AND INDIRECT GHG EMISSIONS AT THE STEYRLING SITE

in [1,000 metric tons CO_2e] (CO_2 equivalent)



DIRECT AND INDIRECT GHG EMISSIONS AT THE TRAISEN SITE

in [1,000 metric tons CO_2e] (CO_2 equivalent)



In order to reach the Paris climate targets, voestalpine Stahl GmbH has launched the CO_2-Reduced Steel climate project as part of a comprehensive decarbonization strategy at the Linz site. The objective is to reduce direct CO_2 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.).

[1] 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_2 quantities. Scope 1, 2 and 3 stated here, however, were not verified by EMAS.

[2] Scope 2 – Location based: 0.146 million tons of CO_2e

[3] Scope 2 – Location based: 3.5 thousand tons of CO_2e

[4] Scope 2 – Location based: 4.7 thousand tons of CO_2e

RESPONSIBLESTEEL

In 2019, voestalpine became one of the first steelmaking companies to join the ResponsibleSteel initiative and to commit to the twelve principles, which 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 monitoring audit was successfully completed in the spring of 2023.

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 ENVIRONMENTALLY FRIENDLY PRODUCTION.

ENVIRONMENTAL FOCUS ON AIR

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

-95%

A savings of 95% dust per ton of crude steel since the mid 1980s is only one of the many values that voestalpine has substantially improved. SO_2 and NO_x were also reduced by 75% and CO_2 by around 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.

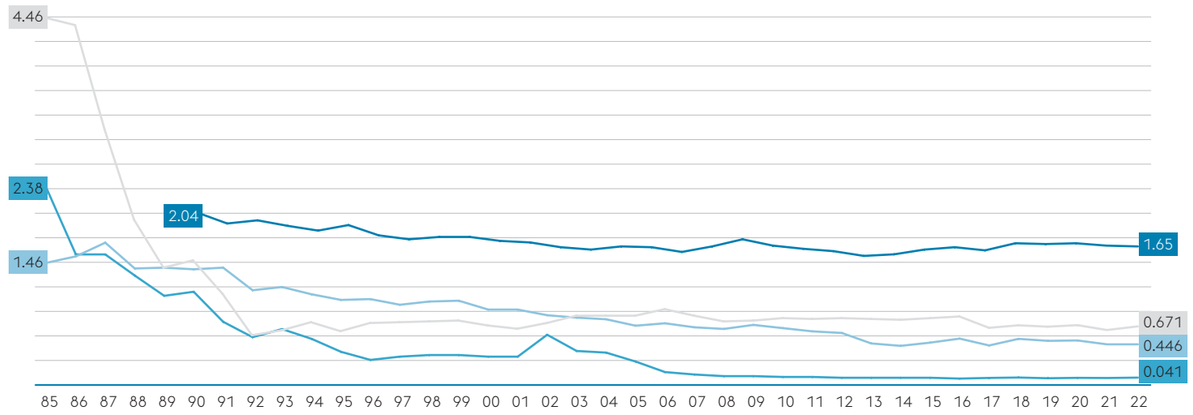
Emissions at the Steyrling site during lime production are also monitored in accordance with the state of the art and are at a very low level. Activities involving particularly large amounts of dust, such as blasting, while taking weather conditions into account.

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.

EMISSIONS REDUCTION AT THE LINZ LOCATION

Per ton of crude steel since the mid 1980s



1) Based on the 2011 Emission Certificate Act (ECA), as amended

Continuous emission measurements at the Linz location

NO_x as NO_2

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Power station	Generating Unit 06	100	73	74	Out of operation
	Generating Unit 03	100	48	51	65
	Generating Unit 04	100	42	31	33
	Generating Unit 05	100	52	40	34
	Generating Unit 07	100	56	60	57
	Gas and steam turbine	33	28	18	18
Blast furnace blower station	Central blower station 2, boiler 1	100	2	3	1
	Central blower station 2, boiler 2	100	6	5	7
Hot-rolling mill	Pusher-type furnace 06	400 [1]	255	253	268
	Pusher-type furnace 07	350 [2]	212	173	195
	Walking-beam furnace 1	220 [3]	120	101	107
Sintering plant	Sinter belt 5	150 [4]	89	85	88
Cold-rolling mill	Hot-dip galvanizing line III	250	97	142	151
	Hot-dip galvanizing line IV	250	101	122	116
	Hot-dip galvanizing line V	250	139	101	104
Heavy plates	Pusher-type furnace 1	500	385	369	348
	Pusher-type furnace 2	300 [5]	154	151	146

SO_2

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Power station	Generating Unit 06	200	83	64	Out of operation
	Generating Unit 03	200	89	81	89
	Generating Unit 04	200	103	80	81
	Generating Unit 05	200	89	77	81
	Generating Unit 07	200	91	81	86
	Gas and steam turbine	67	26	27	28
Blast furnace	Casting bay dedusting (BF A)	350	117	114	118
LD steelmaking plant	Secondary dedusting 1	101.5 [6]	24	44	33
Hot-rolling mill	Pusher-type furnace 06	200	106	142	150
	Pusher-type furnace 07	200	52	65	66
Coking plant	Sulfuric acid and gas cleaning system	1,000 [7]	354	392	428
Sintering plant	Sinter belt 5	350	293	293	288
Heavy plates	Pusher-type furnace 1	200	123	132	138

All emission sources are continuously monitored. The data refer to the respective calendar year.

[1] Pusher-type furnace 6: additional limitation of daily mean values for NO_x of 300 mg/Nm³.
[2] Pusher-type furnace 7: additional limitation of daily mean values for NO_x of 220 mg/Nm³
[3] HBO 1: additional limitation of daily mean values for NO_x of 130 mg/Nm³.
[4] Sinter belt No. 5: additional limitation of daily mean values for NO_x of 100 mg/Nm³.
[5] Pusher-type furnace 2: additional limitation of daily mean values for NO_x of 200 mg/Nm³.
[6] SO_2 limit values in kg/h.
[7] There is also a fraction limit value of 150 kg SO_2/day under normal operating conditions.

CO

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Power station	Generating Unit 03	100	6.4	4.6	7.4
	Generating Unit 04	80	18.9	26.5	19.0
	Generating Unit 05	80	11.2	16.6	20.0
	Generating Unit 07	80	3.9	5.9	10.5
	Gas and steam turbine	33	9.3	8.2	3.9
Blast furnace	Central blower station 2, boiler 1	80	1.3	0.2	0.0
	Central blower station 2, boiler 2	80	1.0	1.0	0.0
Coil coating line	Coil coating line 1	100	1.2	1.3	0.9
	Coil coating line 2	100	7.3	6.1	5.4

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	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Coil coating line	Coil coating line 1	30	1.4	1.6	1.6
	Coil coating line 2	30	3.9	4.0	4.8

H_2S [8]

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Coking plant		500	285	303	321

HF

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Sintering plant	Sinter belt 5	3.0	0.3	1.5	1.1

Hg

	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	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/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2020 CY	2021 CY	2022 CY
Blast furnace	Casting bay dedusting (BF A)	10	4.4	4.7	4.7
	Casting bay dedusting system (BF 5 and 6)	10	0.5	0.3	0.4
Sintering plant	Sinter belt 5	10	2.5	3.7	3.0
	Sinter plant dedusting	10	3.9	4.7	4.8
	Sinter crusher and screening unit (SIBUS)	10	1.9	1.7	1.7
LD steelmaking plant	Secondary dedusting 1	10	5.6	3.8	5.2
	Secondary dedusting 2.1	10	2.4	3.0	4.1
	Secondary dedusting 2.2	10	0.9	2.1	3.8
	Secondary dedusting 3.1	10	0.1	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.

[8] H_2S is contained in the coke gas that is energetically utilized in other process steps. Emissions only occur as SO_2.

Emission measurements at the Steyrling location

NO_x as NO_2

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
Steyrling Lime Plant	Furnace 4	300	Stand By	13.3	Stand By
	Furnace 5	300	39.3	13	13
	Furnace 6	300	44	16.3	21
	Furnace 7	300	46.7	[1]	17

CO

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
Steyrling Lime Plant	Furnace 4	150	Stand By	5.3	Stand By
	Furnace 5	150	6	8.3	9.7
	Furnace 6	150	12.3	9	9
	Furnace 7	150	10.7	[1]	8.3

SO_2

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
Steyrling Lime Plant	Furnace 4	100	Stand By	< NWG [2]	Stand By
	Furnace 5	100	< NWG [2]	< NWG [2]	< NWG [2]
	Furnace 6	100	< NWG [2]	< NWG [2]	< NWG [2]
	Furnace 7	100	< NWG [2]	[1]	< NWG [2]

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	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
Steyrling Lime Plant	Furnace 4	30	Stand By	4.7	Stand By
	Furnace 5	30	13.7	4.3	16.3
	Furnace 6	30	3.7	2.3	4.3
	Furnace 7	30	9.3	[1]	8.7

Dust

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
Steyrling Lime Plant	Furnace 4	10	Stand By	7.3	Stand By
	Furnace 5	10	5.6	5.9	2.4
	Furnace 6	10	0.5	0.3	1.4
	Furnace 7	10	1	[1]	< NWG [2]
	Furnace discharge 4	10	[3]	[3]	Stand By
	Furnace discharge 5	10	[3]	[3]	3.9
	Furnace discharge 6	10	[3]	[3]	3.3
	Furnace discharge 7	10	[3]	[3]	1.5
	Lime extraction	10	[3]	[3]	9.6
	Lime loading	10	[3]	[3]	0.9

[1] Modernization of Lime Furnace 7 in the 2021 calendar year, no measurements taken because of shutdown
[2] Below the detection limit for pollutants
[3] Measurement interval every 3 years, next measurement in the 2022 CY

Emission measurements at the Traisen location

Dust

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	10	[1]	0.1	[1]
	Mixer 1, molding line	10	[1]	[1]	6.4
	AAF Bay 3	10	[1]	[1]	2.4

NO_x als NO_2

	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
voestalpine Giesserei Traisen GmbH & Co KG	Annealing Furnace 2	350 (at < 800 °C)	[1]	52	[1]
	Annealing Furnace 7	350 (at < 800 °C)	[1]	210	[1]
	Annealing Furnace 9	350 (at < 800 °C)	[1]	117	[1]

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	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2020 CY	2021 CY	2022 CY
voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	50	[1]	<NWG [2]	[1]
	Mixer 1, molding line	20 (materials of Class 1)	[1]	[1]	13
		100 (materials of Class 2)	[1]	[1]	13
		150 (materials of Class 3)	[1]	[1]	13
	AAF Bay 3	20 (materials of Class 1)	[1]	[1]	3.3
		100 (materials of Class 2)	[1]	[1]	3.3
		150 (materials of Class 3)	[1]	[1]	3.3

[1] Measurement intervals every three years
[2] Below the detection limit for pollutants

ENVIRONMENTAL FOCUS ON ENERGY

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

> 10%

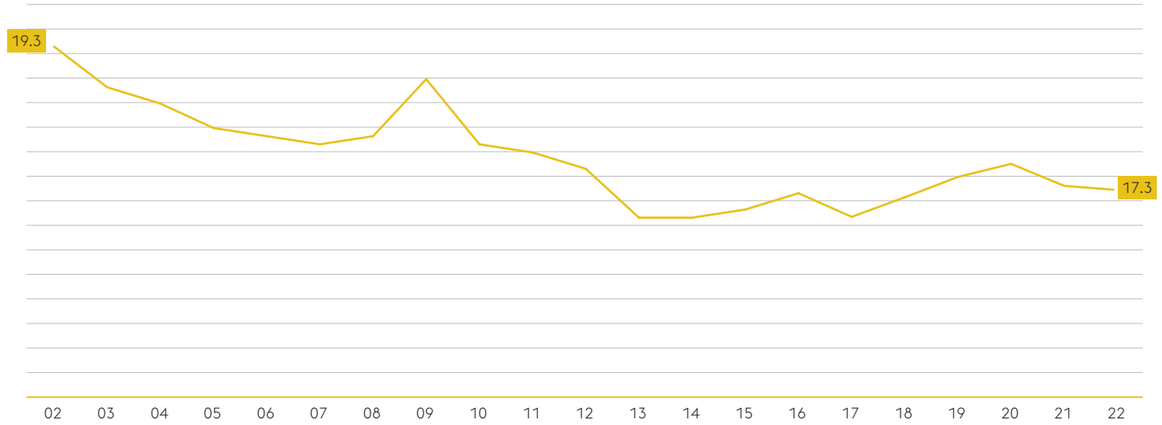
By optimizing production processes and cascading the energy used, specific energy consumption at the Linz location has been reduced by more than 10% over the past 20 years. At the Linz location, nearly 80% of the electrical energy is generated by the company itself.

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 83,000 MWh during the 2022 calendar year.

ENVIRONMENTAL FOCUS ON WATER

Circular economy

89%

Total water consumption at the Linz location amounted in 2022 to roughly 582 million cubic meters, of which roughly 89% (a total of 519 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.

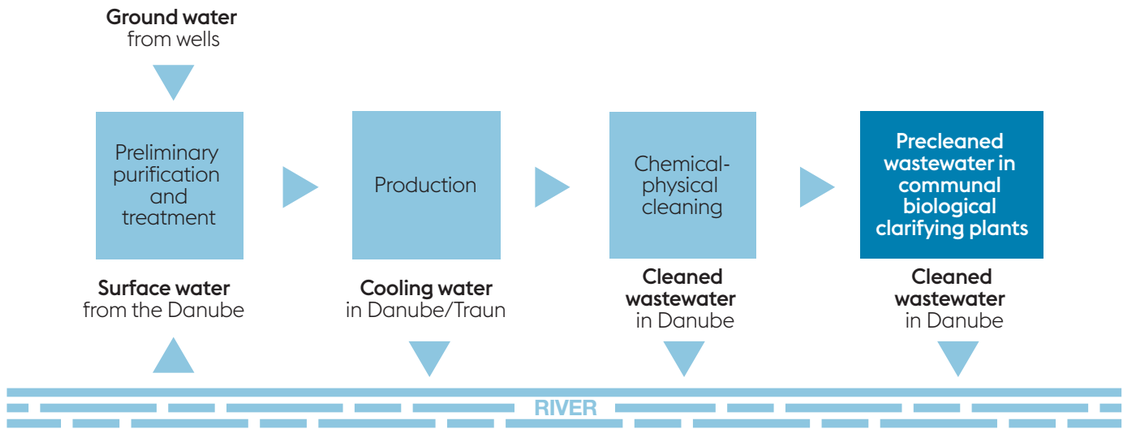
A total of 519 million cubic meters of water were pumped from the Danube in the 2022 calendar year at the Linz location. This cooling water is channeled back into the Danube in compliance with the defined temperature limit values. Depending on the wastewater constituents, was either cleaned before returning 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 impact of production systems at the Linz location on local water systems is relatively small and does not lead to an increase in water scarcity in the region. This conclusion was reached during a Water Scarcity Footprint study conducted in 2018, which, in addition to the Linz location, also included an analysis of all operations and the Group's entire value chain (cradle to gate).

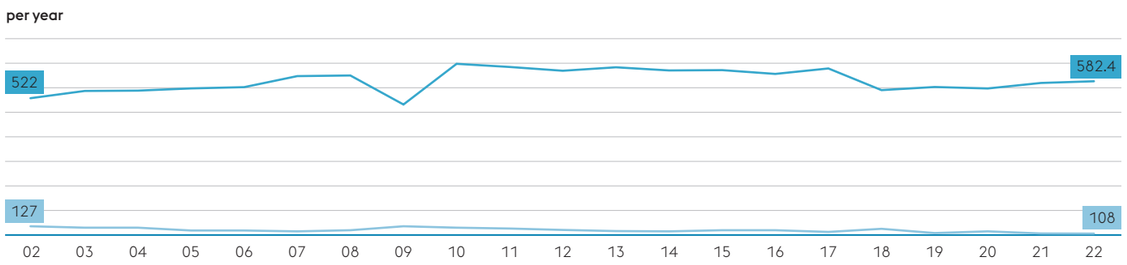
CAREFUL TREATMENT OF WATER AS A NATURAL RESOURCE IS REGARDED AS A FUNDAMENTAL PRIORITY AT voestalpine.



Trends in discharged wastewater volumes [1]

In the 2022 calendar year, the amount of discharged water amounted to 108 m^3 per ton of crude steel.

WATER DISCHARGE VOLUMES



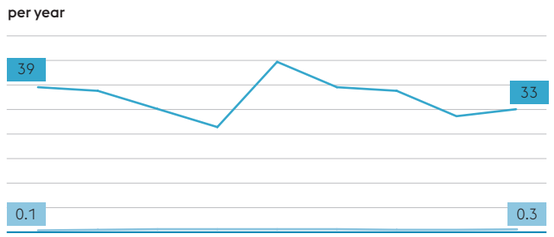
Discharged wastewater volume per year in millions of m^3

Specific discharged wastewater volumes per year in m^3 per ton of crude steel produced

SPECIFIC DISCHARGE INTO DANUBE

Total heavy metals (Pb + Zn + Cr + Ni) in g/t of crude steel [2]

DISCHARGE INTO MUNICIPAL WASTEWATER TREATMENT PLANT



Phenol in g/t crude steel

Total heavy metals (Pb + Zn + Cr + Ni) in g/t crude steel

[1] The water discharge volume consists of many partial flows for which limit values are set and observed.
[2] minus initial load from Danube

ENVIRONMENTAL FOCUS ON WASTE

The objective is to reduce and reuse waste.

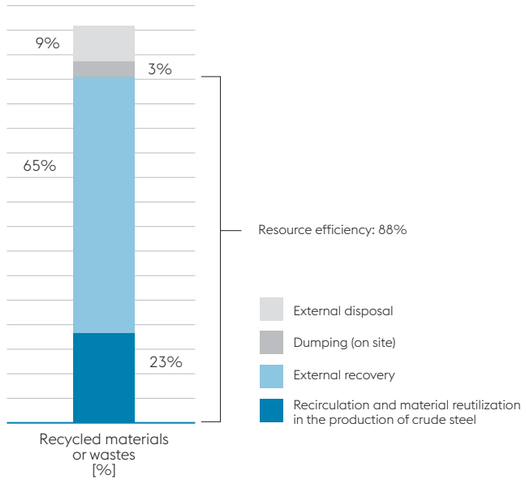
88%

Material recycling and the portion of re-used waste materials in total amount to a resource efficiency of 88% 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



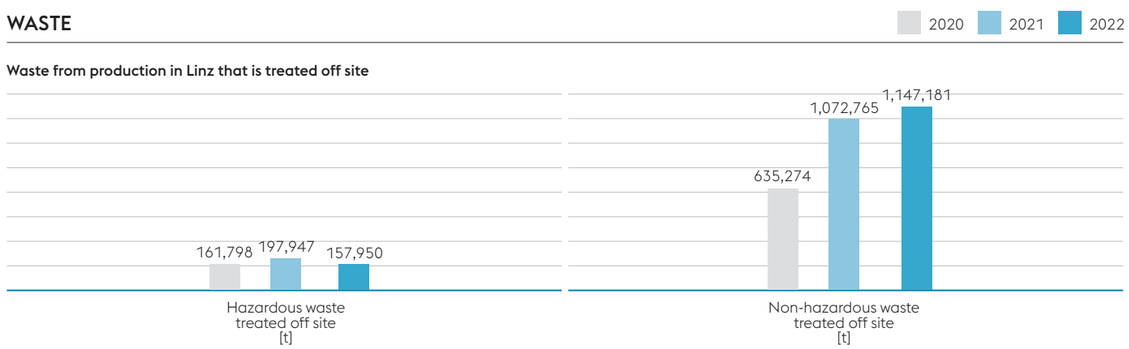
In the 2022 calendar year, roughly 23% of the recycled materials and waste incurred at the Linz location were re-utilized, thus increasing resource efficiency in production processes. (This value is increases to 47% when in-house scrap recycling is taken into account.)

Material recycling and the portion of re-used waste materials in total amount to a resource efficiency of 88% 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

Waste from production in Linz that is treated off site



ENVIRONMENTAL FOCUS ON TRANSPORTS

More rail, less road.

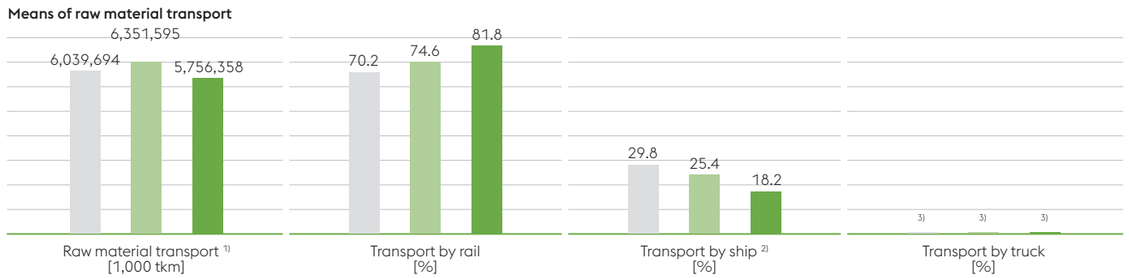
54%

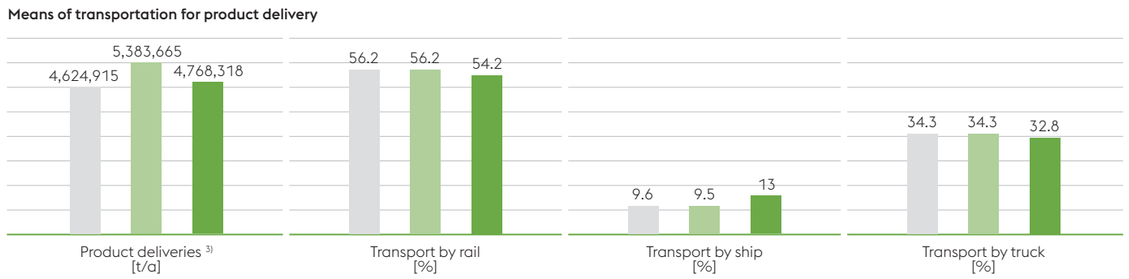
54.2% of the products are delivered by rail. In the case of raw materials, the figure is even as high as 82% by rail, 18% by ship and less than 0.1% by truck. (Linz location, 2022)

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 2020 2021 2022





The definition of 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.

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.

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

ADDITIONAL ENVIRONMENTAL IMPACT

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. Three complaints (2 about noise, 1 about dust) were registered at the Linz location during the 2022/23 financial year, and these have been addressed by voestalpine.

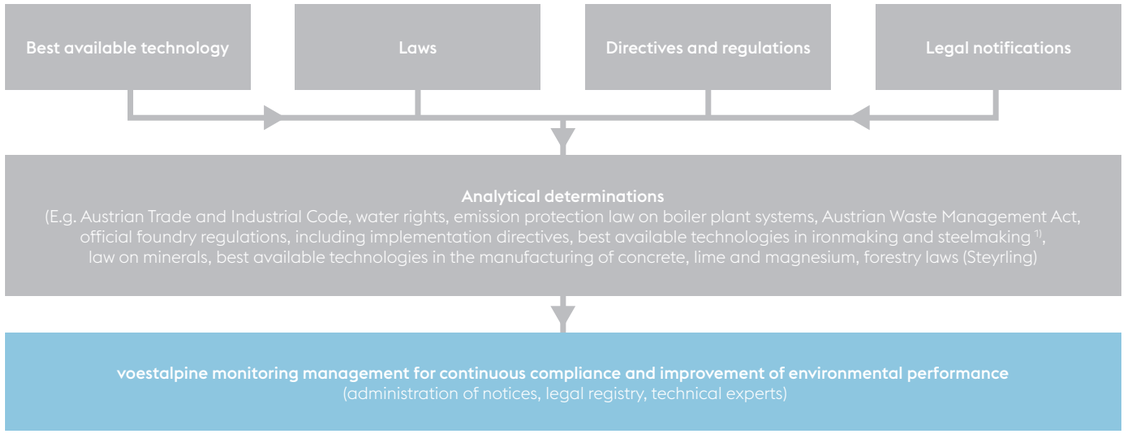
ODOR

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.

[1] Best available techniques in relation to the production of iron and steel

SAFETY TAKES HIGHEST PRIORITY
SEVESO PRODUCTION SYSTEMS

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

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.

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^3 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 boundaries 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 (CaC2):	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_2) in reaction with water yields roughly 258 standard cubic meters of acetylene gas.

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

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 are 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 or +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

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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LRQA

Environmental Verifier's Declaration on Verification and Validation Activities

LRQA Austria GmbH with EMAS environmental verifier registration number AT-V-0022

and accredited for the scope

Integrated mill of voestalpine Stahl GmbH and their subsidiaries at site Linz as well as extraction and production of lime at site Steyrling and production of steel castings at site Traisen.
(separate scopes see appendix)
Nace Codes: 8.11, 19.1, 23.52, 24.1, 24.2, 24.3, 24.5, 25.6, 49.2

declares to have verified

voestalpine Stahl GmbH, voestalpine Giesserei Linz GmbH, voestalpine Camtec GmbH, Cargo Service Gmbh, Logistik Service GmbH, voestalpine Grobblech GmbH, voestalpine Automotive Components, voestalpine Standortservice GmbH, voestalpine Steel & Service Center GmbH, voestalpine Giesserei Traisen GmbH Linz, Steyrling, Traisen
Austria

registration number AT-000216
meets all requirements of Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community Eco-Management and Audit Scheme (EMAS) amended by commission regulation (EU) 2017/1505 and 2018/2026.

By signing this declaration, LRQA declares that:

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,
- the data and information presented in the Environmental Statement of the organisation reflect a reliable, credible and correct image of all the organisation's activities within the scope mentioned in the environmental statement

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

LRQA Ref No: VNA0005063-06

Date of verification:	22 October 2023
Verification Expiry:	21 October 2026
Date of validation:	22 October 2023
Validation expiry:	21 October 2024

Hans Kitzweger, Lead Verifier
LRQA Austria GmbH
1210 Vienna, Floridsdorfer Hauptstraße 1, Austria
on behalf of LRQA Limited
Akkreditierungsnummer: AT-V-0022.

LRQA Austria GmbH, 1210 Vienna, Floridsdorfer Hauptstraße 1, Österreich, FN 239257 Z
Die Gültigkeitserklärung gilt zusammen mit der Validierung als Nachweis über die Verifizierung und Validierung. Sie werden bei der Beantragung auf Eintrag bei der zuständigen Stelle nach Artikel 3 der Verordnung benötigt. Der Text dieser Erklärung muss vollständig in der Umwelterklärung der Firma abgedruckt werden.

Contact

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Head of Environment, Steel Division

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4020 Linz, Austria
christian.schaurhofer@voestalpine.com

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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