



ENVIRONMENTAL REPORT 2022

Consolidated environmental report
for the Linz, Steyrling and Traisen locations

CONTENT

Foreword	04
Overview of the voestalpine Group.....	06
Company principles.....	10
Environment in the Steel Division	14
Environmental principles.....	19
voestalpine Steel Division	22
voestalpine Grobblech GmbH	24
voestalpine Steel & Service Center GmbH	25
voestalpine Giesserei Linz GmbH.....	26
voestalpine Giesserei Traisen GmbH & Co KG	27
voestalpine Camtec GmbH	28
voestalpine Standortservice GmbH	29
Logistik Service GmbH.....	30
Cargo Service GmbH	31
voestalpine Automotive Components Linz GmbH & Co KG.....	32
Production processes.....	34
Climate protection measures	38
EU Lighthouse Project H2Future, green hydrogen	42
Measures implemented in the 2021/22 environmental program.....	44
O76 coke plant remediation project in Linz	46
New measures introduced in the 2022/23 environmental program	48
Measures being implemented in the 2022/23 environmental program	51
Measures not implemented in the 2022/23 environmental program.....	51
Production and energy figures	52
Core indicators at the Linz location	54
Core indicators at the Steyrling location	58
Core indicators at the Traisen location	60
Product Sustainability	62
Direct and indirect greenhouse gas emissions, 2021	66
ResponsibleSteel.....	69
Environmental focus on air.....	72
Environmental focus on energy	78
Environmental focus on water.....	80
Environmental focus on waste	84
Environmental focus on transports.....	86
Additional environmental impact.....	88
Safety is our highest priority: Seveso production systems	92
Information, contact and About Us	98

The content of the consolidated 2022 Environmental Report complies with the requirements of EMAS III Regulation No. 1221/2009 as amended. The content of the updated 2018 Environmental Report complies with requirements of the EMAS III Directive 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 Camtec GmbH, voestalpine Steel and 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 preparing the Environmental Statement 2022. This document is a translation of the validated German document.

FOREWORD

Environmental awareness is an integral part of the corporate philosophy of voestalpine. That is why we conserve resources along the entire production chain and consistently pursue minimization of environmental impact in all our processes and products.



We use the best available technologies to achieve these objectives in the production facilities of voestalpine, and we are continuously improving our efficiency, reducing our emissions and saving energy in our steelmaking processes. In an effort to improve our environmental performance, we have intensified our research of new and environmentally friendly manufacturing processes and have further developed materials and products. Transparent and efficient environmental management systems provide helpful support in all of these activities.

We take holistic responsibility for our products. We have achieved this by continuously optimizing production processes, further developing management systems that take the aspects of sustainable corporate governance and the involvement of our employees into account. We are committed to environmentally conscious behavior and to maintaining an open and objective dialog with our stakeholders.

We have achieved important milestones in recent years. Our clear focus is on converting our steel production op-

erations into a carbon-neutral route. With our greentec steel made by voestalpine, we have developed an ambitious step-by-step green steelmaking plan that pursues a gradual conversion from the coal-based blast furnace to a green power-based electric steelmaking route. This technological conversion to the electric-arc furnace route beginning in 2027 will significantly reduce CO₂ emissions by roughly 30%.

Preparations for this fundamental technology shift have been augmented by other immediately effective measures for greater climate protection and resource efficiency in the course of the 2021/22 fiscal year. Since the end of 2021, we have been manufacturing products in the greentec steel edition. These products are characterized by a reduced carbon footprint on an industrial scale at a high level of transparency. Our installation of photovoltaic systems is also a major step toward the further expansion of in-house generation of green electricity.

The remediation of brownfield coke plant 076 in Linz was also successfully completed after a project duration of

roughly 10 years. In addition to the hotspot clearing of unsaturated soil, other safeguards and technologies were implemented such as a funnel-and-gate system, soil vapor extraction and scooping. At the end of the project, conditions were created for the contaminated site to be designated as secure.

The current environmental statement summarizes our efforts in the area of strategic and operational environmental protection. It also details specific measures and achievements and provides an outlook of our environmentally sustainable future.

DI Hubert Zajicek, MBA

Member of the Management Board at voestalpine AG
Chairman of the Management Board in the Steel Division

OVERVIEW OF THE voestalpine Group

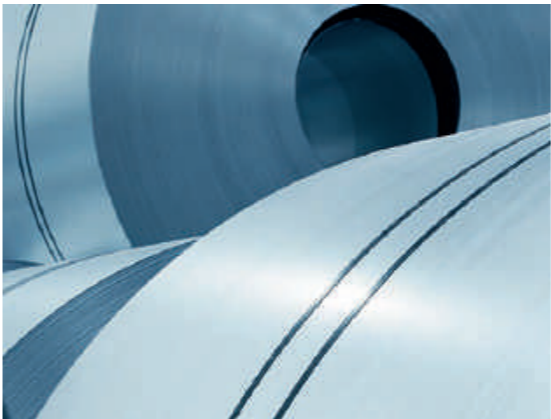
In its areas of business, voestalpine boasts worldwide leadership in combined material and processing expertise. As a leader in technology and industrial goods, the voestalpine Group focuses on products and systems made of steel and other metals and provides unsurpassed quality in technology-intensive industries and market niches. voestalpine is committed to the global climate targets and is working intensively on technologies aimed at reducing its CO₂ emissions with the long-term objective of decarbonizing production.

With its highest-quality products and systems made of steel and other metals, voestalpine is one of the leading suppliers to the automotive, household-appliance as well as energy and aviation industries worldwide. voestalpine is also the world market leader in complete railway infrastructure systems, tool steels and special sections. With its headquarters in Linz and a total of more than 500 subsidiaries and locations in more than fifty countries, voestalpine is represented on all five continents of the world.

Each company in the voestalpine Group is assigned to one of four divisions. The voestalpine Group achieved a sales volume in the 2021/22 fiscal year of 14.9 billion euros and an operative result (EBITDA) of 2.3 billion euros. The Group employed roughly 50.200 employees. Employees hold 14.8 percent of the corporate shares. The voestalpine Group consists of four divisions, and in their core segments, these divisions are among the leading suppliers in Europe or in the world.

THE FOUR DIVISIONS OF THE voestalpine Group AND THEIR PRODUCT PORTFOLIOS ARE AMONG THE LEADING SUPPLIERS IN EUROPE OR EVEN WORLDWIDE.

Steel Division



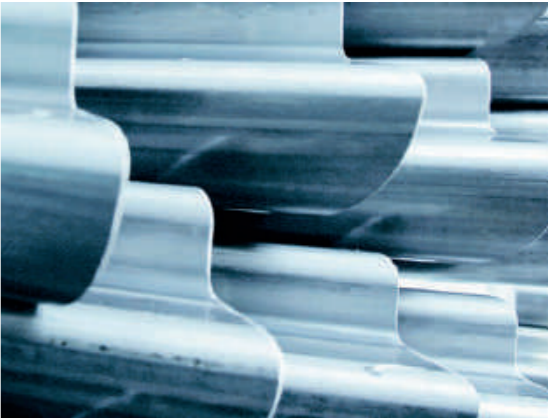
High Performance Metals Division



Metal Engineering Division



Metal Forming Division



SHAPING THE FUTURE OF E-MOBILITY



AS A PARTNER TO AUTO-
MOTIVE MANUFACTURERS,
IT IS IMPORTANT TO PROVIDE
CUSTOMERS WITH THE RIGHT
PRODUCTS DURING THIS
TECHNOLOGY TRANSITION.



STRIKING THE RIGHT BALANCE
BETWEEN PRODUCTIVITY,
QUALITY, SAFETY AND THE
ENVIRONMENT IS OUR KEY TO
SUSTAINABLY REMAINING
“ONE STEP AHEAD.”

COMPANY PRINCIPLES

As a globally acting producer of high-quality steel products, the Steel Division strives toward leadership in the areas of quality, technology and profit in the European steelmaking industry and meets the challenge of combining growth and competitiveness with sustainable action. The integrated management systems for quality, work safety and health and the environment, risk, sustainability and information management make a valuable contribution to the achievement of these objectives, which is why the Management Board has adopted the following principles:

CUSTOMER ORIENTATION

Understanding our customers and their expectations in our products, services and organization is one of our highest priorities. The expectations of our customers are the basis for how they define the quality of our company. We orient our processes to customer expectations and thus lay the foundation for sustainable customer satisfaction.

WORK SAFETY AND HEALTH

The company and its employees are mutually responsible for safety and health. This is how we create safe and healthy working conditions, We create safe places to work for all our employees, promote an atmosphere of self-responsibility and help our staff members conscientiously adopt safe and healthy practices both at work and in their leisure time.

HUMAN RIGHTS AND COMPLIANCE

We uphold human rights pursuant to the UN Charter and the European Convention on Human Rights and Fundamental Freedoms, and we fully support the UN Global Compact. We comply with the laws of each country in which the Steel Division of voestalpine does any business. In our view, compliance is an expression of a culture that is built on ethical and moral principles. We promote appreciative and respectful interaction and take a strong stand against workplace discrimination and harassment.

ENVIRONMENTAL PROTECTION

Active environmental protection is firmly anchored in our company. It affects all areas of our organization and is geared to achieving the most economically efficient use of resources and minimizing the environmental impact of our processes and products. Our corporate strategy and environmental guidelines fully comply with international climate objectives and the UN Sustainable Development Goals, and we implement the most effective technologies available for a circular economy, lifecycle assessment and the minimization of emissions to the air, soil and water. The Steel Division is expected to be fully decarbonized and to have achieved CO₂ neutrality by the year 2050 at the latest.

EMPLOYEE DEVELOPMENT

Competent, motivated and conscientious staff members are the most important force in our company. Appropriate measures are taken to maintain the qualifications of each employee as well as to promote and adapt them to future requirements. We create a modern and attractive place to work, a place where each of our employees can flourish.



INNOVATION AND CONTINUOUS IMPROVEMENT

We are not satisfied with a performance that is anything less than excellent. Innovative and sustainable product and process development supported by digitalization builds the foundation for accessing new markets, meeting future customer requirements and implementing new production technologies. Operational excellence and the continual improvement and digitalization of processes and management systems are the prerequisites to success and added value in our company. Each employee is tasked with the challenge of making continual improvement.

STRATEGY OBJECTIVES OPPORTUNITIES

Our strategy analyzes and takes megatrends and environmental issues into account in identifying opportunities and risks in a timely manner, in recognizing and adapting strategic objectives and subsequently communicating them. In compliance with applicable law, the management systems of the Steel Division effectively achieve our qualitative, ecological and social objectives.

RISK MANAGEMENT

The determination and treatment of opportunities and risks that can either promote or endanger the growth of corporate value are important management tasks and are thus an integral part of our integrated management activities on a company level.

PREVENTION

Accidents at work, health hazards, adverse effects to the environment, quality issues, information security incidents and damage to production systems can be avoided through preventive measures. Errors and incidents that occur in spite of our every effort are seen as an opportunity to improve. For this reason they are documented, analyzed and corrected.

SUPPLIERS

We foster sustainable partnerships based on mutual trust and understanding with our suppliers in order to ensure the highest levels of sustainable performance for our customers, whom we include in our development activities. We work together with our customers in further optimizing the quality of processes, products and services. Supply chain management in the Steel Division identifies the social and environmental effects and risks of important suppliers and takes these effects and risks into account during supplier evaluation and development.

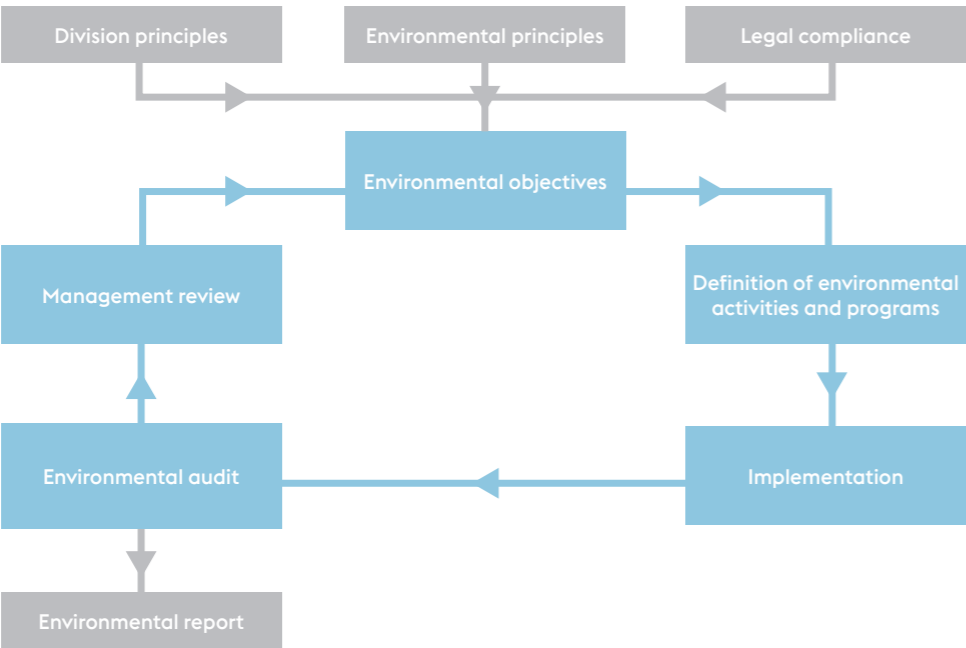
COMPANY AND PARTNERSHIPS

At voestalpine, we work together with a large number of partners and interest groups. Open and regular communication with respect to the concerns and expectations of every partner and interest group is the basis for finding common solutions based on sustainability. At the top of our list of priorities is careful consideration of their interests and compliance with pertinent regulations in the course of our daily work.

ENVIRONMENT IN THE STEEL DIVISION

Overview of focal points and organization

Responsible action in the interest of sustainability is an integral part of the corporate culture at voestalpine. Numerous measures to improve the environment have been successfully implemented over several decades.



At the beginning of the 1970s, company management decided for the first time to implement a program with environmental principles and targets and to involve the employees in this effort. The former Environmental Protection and Environmental Technologies department was established in 1985. The department worked continually to raise awareness for environmental issues and to establish a strong environmental management system.

Active environmental protection is now firmly anchored in the activities of our employees and in our corporate principles.

Broad-based environmental management

The voestalpine Group has implemented management systems on a broad scale worldwide. 75% of the production sites, representing 83% of the total volume, have implemented an environmental management system pursuant to ISO 14001 or EMAS. 30% of the companies are subject to certified energy management pursuant to ISO 50001.

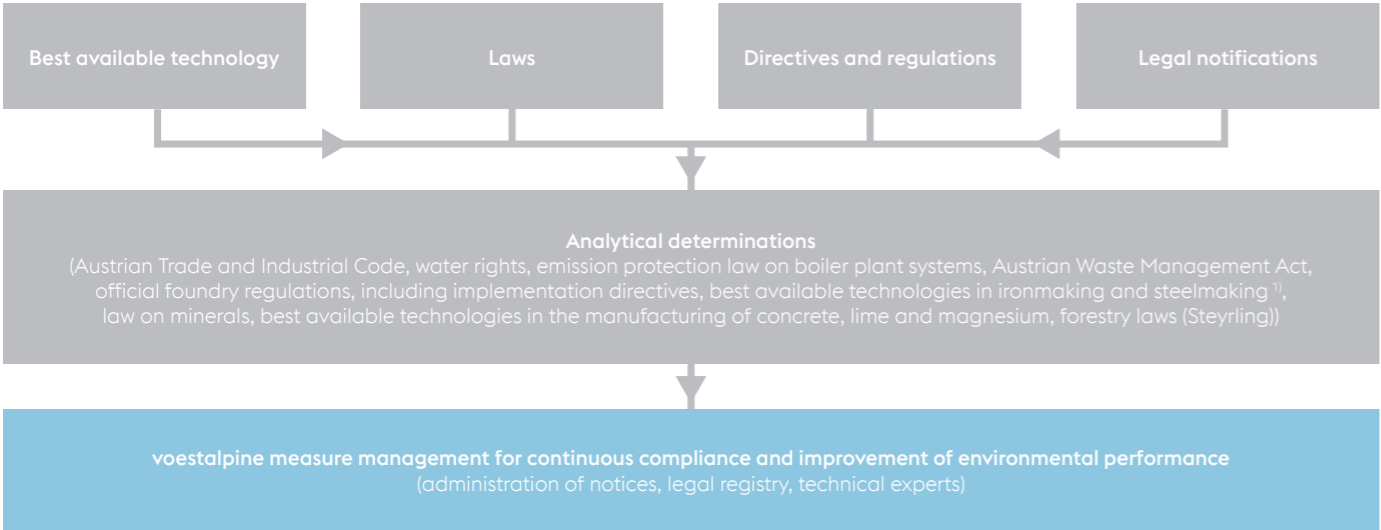
The Linz, Steyrling and Traisen locations of voestalpine operate a certified/validated environmental management system pursuant to ISO 14001 and EMAS. As part of the integrated management system,

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-compliant 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.



ENVIRONMENTAL PROTECTION BEGINS WITH EVERY INDIVIDUAL EMPLOYEE AND IS FIRMLY ANCHORED IN THE PHILOSOPHY OF THE COMPANY.

COMPLIANCE WITH ENVIRONMENTAL REGULATIONS



Environmental strategy at voestalpine

Responsibilities in environmental management have changed considerably. Environmental protection is increasingly being expanded to include cross-cutting issues of high strategic importance to the Group. This applies particularly to issues pertaining to energy and climate policies, related technology issues and topics such as product sustainability and lifecycle assessment. Coordination of stakeholder communication (including advocacy at national, European and global levels) and solution-oriented dialog with policymakers, environmental organizations and academia

have become extremely important. The environmental management of production operations concerns itself with environmental issues such as emissions, water, waste and resource efficiency at the Linz, Steyrling and Traisen sites. Active environmental management supports analysis and continuous improvement of environmental performance.



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



ENVIRONMENTAL PRINCIPLES

Environmental responsibility is firmly anchored in the corporate philosophy of voestalpine.

To this end, we strive to use resources such as raw materials and energy sparingly along the entire production chain and to minimize the environmental impact of processes and products.

The following environmental principles are understood in the context of individual voestalpine companies who have been faithful to the environmental principles of the World Steel Association.

HOLISTIC RESPONSIBILITY FOR OUR PRODUCTS

voestalpine produces and develops products and system solutions in close co-operation with its customers and suppliers, fully taking ecological demands such as long-life, resource preservation and optimum recyclability into account.

OPTIMIZATION OF PRODUCTION TECHNOLOGIES

voestalpine runs its facilities in an economically sensible manner using the best available technology to minimize the environmental impact. Efficient use of raw materials and energy is of prime importance to voestalpine.

ESTABLISHMENT OF ENVIRONMENTAL MANAGEMENT SYSTEMS

voestalpine facilitates the development of environmental management systems in its Group companies. The core of these management systems is the observance of environmental obligations and the maintenance of continuous improvement programs.

EMPLOYEE INTEGRATION

voestalpine sees environmental protection and continuous improvement as the task of each individual employee at all levels and in all areas of business. Responsible and expert employees ensure the best possible modes of operation of technical facilities and contribute through environmentally aware behavior to continuous improvement.

OPEN AND OBJECTIVE DIALOG

As the basis for shared and sustainable solutions, voestalpine maintains open and objective dialogs with internal and external interest groups in all issues relevant to the corporate Group's environmental impact. The group-wide exchange of knowledge between all production sites is particularly encouraged.



voestalpine Steel Division

As a global manufacturer of high-quality steel products, the Steel Division assumes a major role in shaping a clean

and livable future. In steel production, the Steel Division has set benchmarks in the current production route and is

now pursuing an ambitious step-by-step plan to achieve climate-neutral steel production with its greentec steel.

In a first step, the Steel Division supplies every flat steel product in a CO₂-reduced greentec steel edition and is working on the implementation of climate-friendly production technologies based on green electricity and hydrogen. Renowned automotive manufacturers and component suppliers rely on the highest-quality steel strip manufactured in the division as well as on the customer support that it provides on a global basis. The Steel Division is one of the most prominent partners to the European House and Machinery industries. The Division manufactures heavy plates and cast products for applications under the most difficult conditions in the energy industry and provides customized solutions for the expansion of renewable energy.

voestalpine Stahl GmbH

The parent company of the division is voestalpine Stahl GmbH, which operates a fully integrated metallurgical plant with all the process steps, including the coke plant, sintering plant, blast furnaces, steelmaking plant, hot-rolling and cold-rolling mills as well as galvanizing and organic coating lines. Our products include high-quality hot-rolled, cold-rolled, electrogalvanized, hot-dip galvanized and organic-coated steel strip to form the foundation for a wide variety of further processing steps. The lime used in production at the Linz site has been mined at the Steyrling lime plant in Upper Austria since 1948. Approximately 50% of the lime is processed

in shaft furnaces into burned lime. The most significant customers are the steelmaking facilities in Linz and Donawitz. A smaller share of the fine burned lime is sold to the construction industry, wastewater treatment facilities or the fertilizer industry. 50% of the mined lime is used as splinters (unburned lime), primarily in the sintering plant in Linz as well as in surrounding cement plants. A small portion that is also unburned leaves the works as armor stones, primarily for use in slope reinforcements along waterways.



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voestalpine Grobblech GmbH

A company that provides products and solutions to demanding niche markets, voestalpine Grobblech GmbH is a fully owned subsidiary of voestalpine Stahl GmbH and has its headquarters in Linz, Austria.

The company is known throughout the world as a supplier of thermomechanically rolled structural steels for offshore rigs, sour-gas-resistant hot-rolled tube plates and high-strength deep-ocean plates for pipeline construction. In the field of renewable energies, voestalpine Grobblech supplies high-quality steels for offshore wind turbines and onshore wind towers, for pressure pipelines of hydro-power plants and for the storage and transport of liquid natural gas (LNG) and hydrogen.

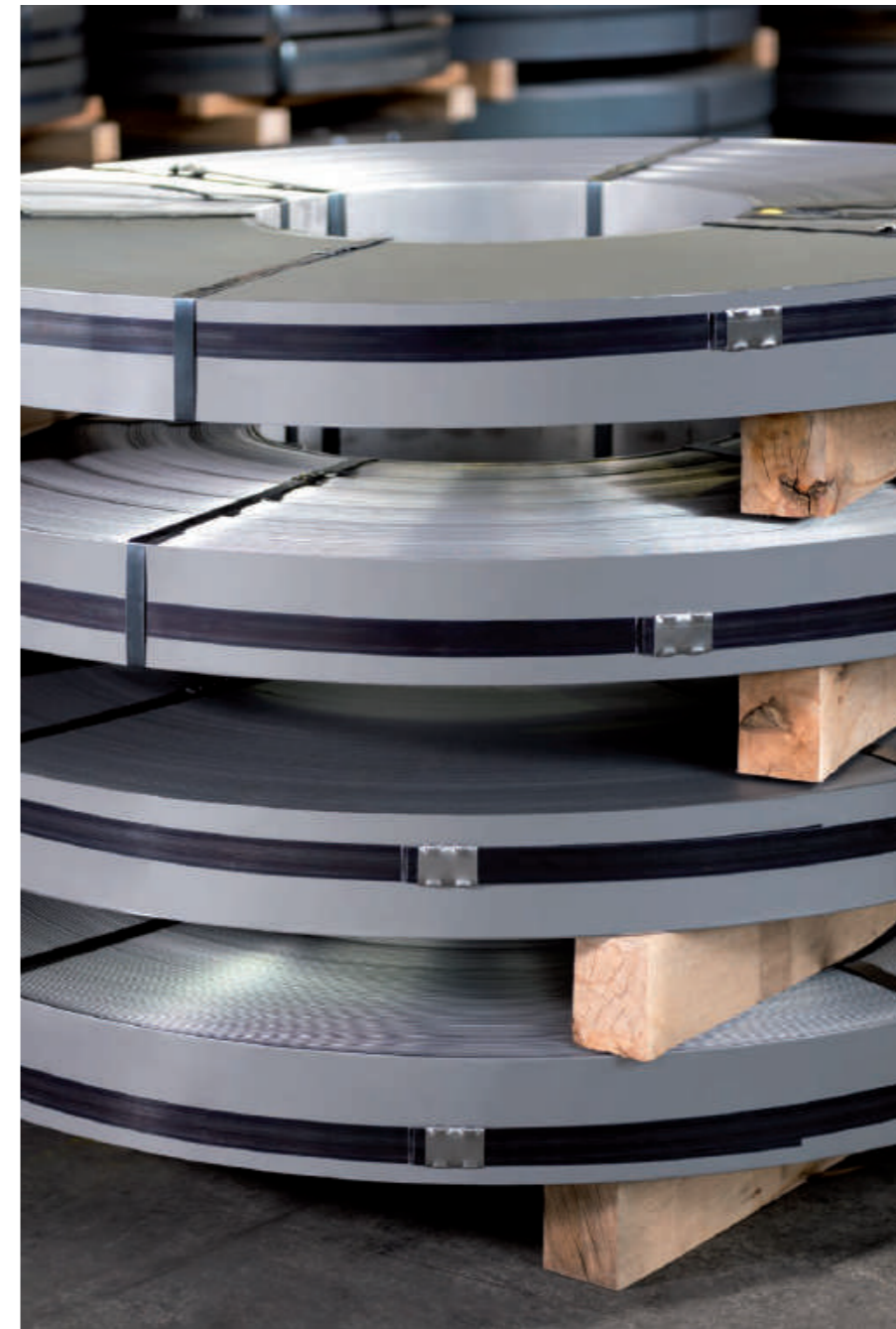
As the world's largest manufacturer of roll-bonded clad plates and heads, the company supplies shell plates and heads for advanced vessels from a single source. An innovative solution provider in the areas of steel structures and bridge building, the company is a premium supplier of high-strength and wear-resistant steels for vehicle, crane and mining applications.



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voestalpine Steel & Service Center GmbH

voestalpine Steel and Service Center Group processes two million tons of steel each year and is one of the largest steel service centers in Europe. In collaboration with voestalpine Steel Service Center Polska and voestalpine Steel Service Center Romania, the group of companies with headquarters in Linz employs roughly 750 employees and achieves an annual sales volume of approximately one billion euros.



The product mix ranges from slit strip and cut-to-length sheets and tailor-made blanks for the automotive industry to cut shapes for the machinery industry. As part of an integrated steel works of the Steel Division, we supply products of the highest voestalpine quality.

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voestalpine Giesserei Linz GmbH

Wholly owned by voestalpine Stahl GmbH, voestalpine Giesserei Linz GmbH currently employs approximately

230 staff members. The voestalpine Giesserei Group offers a complete portfolio of top-quality steel castings, from a few kilograms to 200 tons in weight.

The castings find their applications predominantly in the energy sector and in mechanical engineering. They are delivered in both rough and machined condition. The company stands for innovative and total solutions that go far beyond the supply of castings. Based on customer specifications, lightweight to medium-weight castings with complex geometries are manufactured in more than 100 steel grades and nickel-based alloys. Highly trained employees guarantee added value for our customers, from professional advice to precision machining and assembly services. State-of-the-art facilities and production methods provide sa-

fety for employees and the environment.

Innovative technologies in production save resources and revolutionize the production of complex castings in the shortest possible time.

Environmental focus of voestalpine Giesserei Linz GmbH

The topic of sustainability in the voestalpine Giesserei Group is strategically anchored in every company location. The must-win battles in our sustainability strategy to reduce our carbon footprint include the implementation of new technologies such as 3D sand printing, automated in-

dustrial robot welding systems, energy efficiency measures in production routes, the creation of conditions that make it possible to use renewable energies and the conservation of raw and recycled materials such as sand regeneration processes in which 93% of the sand is recycled. Creating the right employee mindset with respect to sustainability is an essential key to success in the Giesserei Group.



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voestalpine Giesserei Traisen GmbH & Co KG

voestalpine Giesserei Traisen GmbH & Co KG is a wholly owned subsidiary of voestalpine Stahl GmbH.

A reliable supplier of high-quality castings for extremely high customer requirements worldwide.



costs have also made a major contribution to environmental protection.

Until the end of the 2021 business year, a large portion of the energy required for the production process was provided by two hydropower plants on the Traisen river. Investments will be made in the coming months to build a large-scale photovoltaic system. Process and drinking water is provided by natural springs as well as by a water well located on site.

The high-quality products and innovative overall solutions of the Traisen foundry are in great demand throughout the world, especially in the energy industry, e.g. hydropower, steam turbines, gas turbines, offshore installations, oil and gas as well as in the machinery industry. Special applications and rail vehicle components are also included in the product portfolio. Roughly 6,000 tons of steel castings are produced each year.

Innovative technologies in production save resources and revolutionize the production of complex castings in the shortest possible time.

Wholly owned by voestalpine Stahl GmbH, voestalpine Giesserei Traisen GmbH & Co KG currently employs approximately 230 staff members.

Environmental focus of voestalpine Giesserei Traisen GmbH & Co KG

The site of voestalpine Giesserei Traisen GmbH & Co is divided into two parts by a river of the same name, the Traisen. Our closeness to nature and the environment has also led to increased awareness of our surroundings since the company was founded in 1833. The Traisen foundry is committed to continuously improving its production routines in order to make

the best possible use of valuable resources. For example, depending on the production volumes, the most efficient unit can be selected from among the two arc furnaces and two induction furnaces. In addition, the AOD converter is used to produce sophisticated steel grades.

The sand used in the foundry process are regenerated. Roughly 93% of the sand can be recycled.

The 3D sand printing competence center has made it possible for voestalpine Giesserei Traisen to take yet another step toward sustainability. This innovative sand-printing technology eliminates the need to produce elaborate wooden models. The integrated sand recycling system, optimized use of resources and reduced logistics

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voestalpine Camtec GmbH

The system patented by voestalpine Camtec GmbH at the Linz location features a long service life as well as high speed and precision. The wide range of innovative and tolerance-precise products supplied by voestalpine Camtec meets all process requirements and has convinced renowned customers for many years.

A world leader in the production of cam units and maintenance-free cam sliders, voestalpine Camtec GmbH supplies high quality to the automotive and mechanical engineering industries.

As an established partner to renowned customers, voestalpine Camtec has access to an international service and sales network with headquarters in Linz, Austria.



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voestalpine Standortservice GmbH

A fully owned subsidiary of voestalpine Stahl GmbH, voestalpine Standortservice GmbH has been active since 2011 as an infrastructure service provider for the Steel Division and third-party companies at the Linz site. The areas of responsibility include vocational medicine, plant security and the works fire department.



Works fire department
The works fire department is responsible for fire protection at the Linz site. In addition to firefighting and active prevention of hazards (technical operations), the works fire department is also an expert contact for issues regarding holistic fire protection and preventive measures. In addition to ongoing inspections and testing of fire protection equipment, great attention is also paid to ensuring that employees undergo regular training and receive further education.

Vocational Health Center
The Vocational Health Center offers occupational medicine, occupational health checkups, physiotherapy, company rescue services and company health programs. The occupational medical staff carries out occupational medical examinations pursuant to the Ordinance on Health Monitoring at the Workplace (VGÜ) and works preventively together with the occupational safety department. Both acute and chronic conditions are treated at the medical center. Treatments can be augmented by physiotherapy for both acute conditions and preventive cases. Emergency paramedics are available 24 hours a day. A major focus is on promoting occupational health at our site.

Works Security
The services of works security of voestalpine Standortservice GmbH range from consultation focusing on security issues, the design and installation of alarm systems, the creation of safety and security strategies and daily activities in securing the works premises. State-of-the-art security services are guaranteed by highly qualified personnel, personal dedication, continuous education and training of our employees as well as by effective cooperation with internal and external blue-light organizations.

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Logistik Service GmbH

Logistik Service GmbH (LogServ) was established in 2001 as an affiliated company of voestalpine Stahl GmbH.

The company is a full-service provider for industrial logistics and offers innovative solutions tailored to specific needs and company processes.

Customers are primarily at home in metal production and processing, construction and processing industries, mechanical engineering and plant building and the automotive and automotive supply industries.

In the railway sector, Logistik Service GmbH serves operators of plant and connecting railroads, private railway traffic companies and private freight car rental companies. At the voestalpine site in Linz, LogServ operates Austria's largest railway feeder line and its own Danube river port with efficient unloading facilities.



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Cargo Service GmbH

Cargo Service GmbH (CargoServ) was established in 2001 as a wholly owned company of Logistik Service GmbH with

headquarters in Linz. The company is established in the European railway network and offers as a private player alternative strategies for block train freight transportation in the public railway network.



Railway and other services are performed for customers outside the Group in the field of freight logistics.

The company is also developing new process-optimized strategies for international transport as part of a comprehensive logistics network.

As a private rail transport company with a high level of expertise, CargoServ offers a comprehensive range of services.

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voestalpine Automotive Components Linz GmbH & Co KG

Laser-welded blanks allow creative solutions for more security and less weight in the automobile. As a 100% subsidiary of the Metal Forming Division, voestalpine Automotive Components Linz GmbH & CO KG has been providing innovative components in large-scale serial production since 1997 to renowned customers in the automotive industry.



The services of voestalpine Automotive Components Linz GmbH & CO KG include the development, optimization and quality-controlled production of laser-welded blanks with linear, semi-linear and non-linear weld seams for applications in the automotive industry. The primary product of voestalpine Automotive Components

Linz GmbH & CO KG are laser-welded blanks, produced through layer-joining two or more sheets of differing thicknesses, material strengths or with different coatings. Laser-welded blanks are important preliminary products for pressed parts used in the car bodies. This range of tailor-made products, referred to in the international

market as tailor-welded blanks, makes significant contributions with respect to improved cost efficiency, weight reduction, environmental stability and functional optimization in the field of automotive body parts.

voestalpine Automotive Components Linz GmbH & Co KG, a company in the

Metal Forming Division, is a limited partnership dedicated to the environmental regulations of the voestalpine Group as well as the Charta for long-term and sustainable development as set forth by the International Chamber of Commerce (ICC). In an effort to reduce environmental impact, voestalpine Automotive Components Linz GmbH und Co KG uses the best available and economically justifiable technologies. The clear objective is to reduce the carbon footprint

in manufacturing to zero by the year 2035. Of course the company is pleased to comply with every applicable legal environmental regulation. The company has adopted the following policies and objectives in its efforts to continually improve operations and to protect the environment in its production facilities.

voestalpine Automotive Components Linz GmbH & Co KG

- » Environmental protection deemed an important responsibility of company management
- » An environmental management system for implementation of concrete environmental activities
- » Environmental management system in accordance with ISO 14001 and EMAS
- » Knowledge and keen sense of responsibility among contributor members and cooperation at all levels
- » Raw materials and energy consumed as sparingly as possible
- » Environmental impact reduced as far as possible in production processes and activities
- » Open and matter-of-fact dialog with customers, governmental officials, neighbors and the interested public
- » Preference to material and thermal recycling
- » Product development activities to reduce the environmental impact of production, thus saving weight, reducing fuel consumption and improving material usage
- » A CO₂ roadmap is in place to achieve carbon neutrality by the year 2035

The Management Board of voestalpine Automotive Components Linz GmbH und Co KG is fully dedicated to these principles.

voestalpine Automotive Components Linz GmbH & Co KG

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PRODUCTION PROCESSES

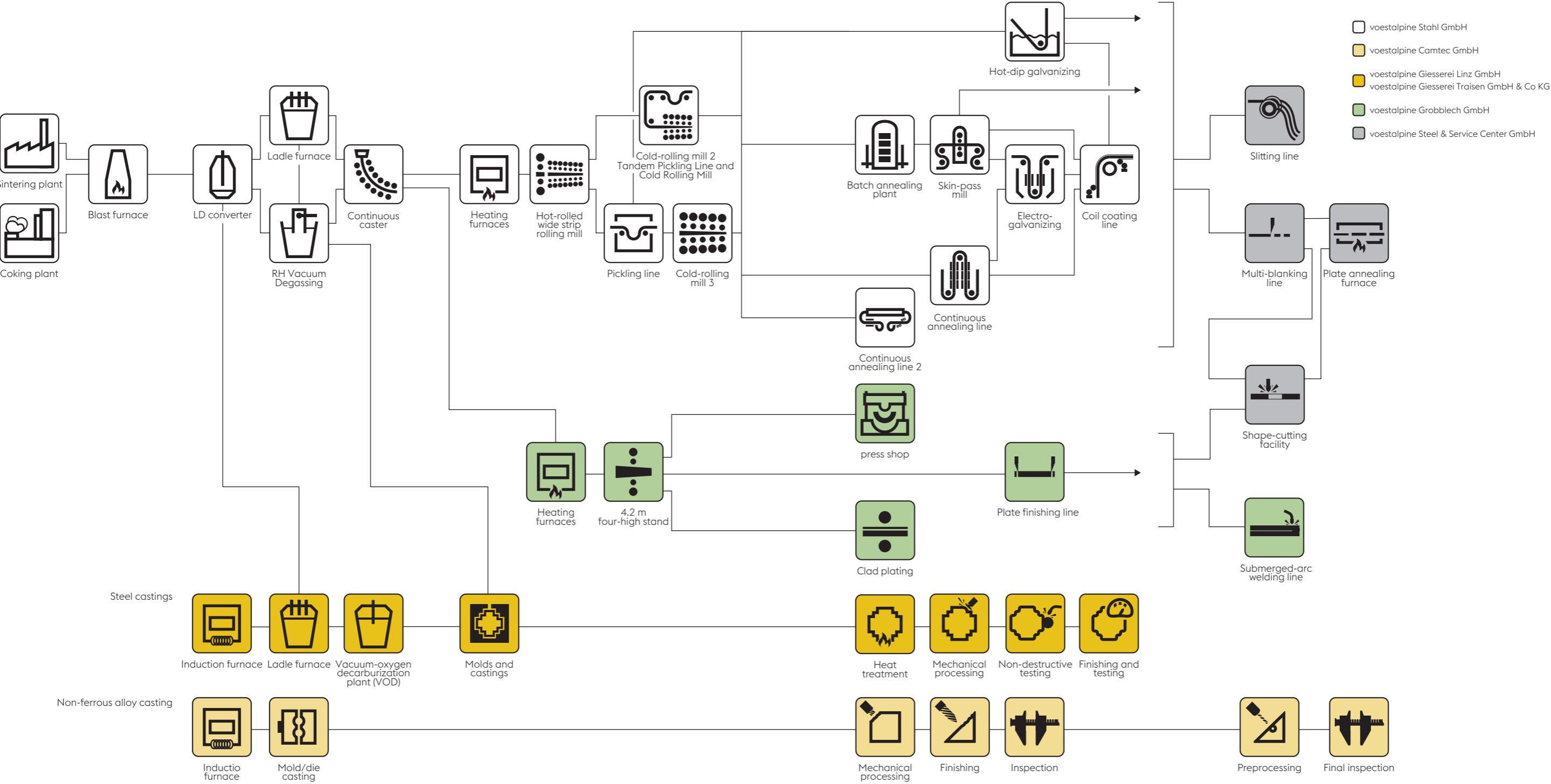
PRODUCTION OF HOT METAL

STEELMAKING, CASTING

ROLLING

SURFACE TREATMENT

PREPROCESSING



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 Steyring 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 in the 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.



OUR PATH TO A GREEN FUTURE:
INNOVATIONS FOR THE
STEELMAKING OF TOMORROW

CLIMATE PROTECTION MEASURES

Now voestalpine has taken the first steps toward implementation of an ambitious greentec steel plan to achieve climate neutrality. The Supervisory Board has now made the final decision for a gradual conversion to the electric-arc furnace technology. The voestalpine Group has also taken important steps that contribute directly to climate protection, including initial delivery of CO₂-reduced steel and further expansion of our capacity to generate green electricity using photovoltaic systems.

Political environment

Although the political objectives at the EU level (reduction of CO₂ emissions by at least 55% by the year 2030 and climate neutrality by the year 2050) and in Austria (climate neutrality already by 2040) have been defined for some time, the primary conditions for achieving these ambitious targets are currently not yet available.

Work is being carried out on the „Fit for 55“ legislative package of the European Union to implement the Green Deal, including revision of emissions trading and introduction of an associated CO₂ limit compensation mechanism, and at national level to create the necessary preconditions. In Austria this is to be financed by a transformation fund for energy-intensive industries, which has been under discussion since the fall of 2020, or location policy strategies for linking climate and industrial policy.



The steelmaking industry and other energy-intensive industries are counting on a coordinated strategy on the EU and member-state level that would support the achievement of climate neutrality and answers the following questions that are existential for the continued existence of industrial companies in global competition:

- » How can renewable energy be generated in the required quantities and transported to the users?
- » How can green electricity and green hydrogen be sourced in the quantities required and at competitive prices?
- » How can uninterrupted supply be guaranteed?
- » What infrastructures can be established for supply, transmission and storage?
- » How can companies be supported during this transformation when faced with additional investment and operating costs, for example by earmarking proceeds from the auctioning of CO₂ allowances and returning them to European and national decarbonization funds?
- » How can we avoid carbon leakage, meaning the relocation of companies from the European Union to regions with less stringent climate protection requirements?



EU emissions trading

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. During the 2021/22 fiscal year, this accounted for roughly one third of the total CO₂ emissions, as was the case on average in previous years. In the period under review, the CO₂ price almost doubled, leading to a corresponding increase in the cost burden on earnings of the voestalpine Group. Plans of the EU Commission are supported in large part by the EU Parliament and envisage a

further significant reduction in the number of certificates and allocated free emission from 2026 in conjunction with the introduction of a carbon border adjustment mechanism (CBAM). This will also lead to an exorbitant increase in the cost of additional certificates. Should these funds be returned to companies for specific purposes in order to finance the technological conversion to long-term CO₂-free production, this money will be available to companies for further climate protection investment.

greentec steel: voestalpine plan for climate neutrality

In the past year, the voestalpine Group further specified and advanced its strategies for achieving climate neutrality.

The greentec steel of voestalpine is an ambitious step-by-step plan to make a valuable contribution to the achievement of crucial global climate targets.

In the initial step and dependent on economic feasibility, the strategy proposes a gradual conversion from the coal-based blast furnace route to green electricity-powered electric arc furnace technology. As early as 2027, one electric arc furnace can be started up at each of the Austrian sites in Linz and Donawitz. The planned production capacity will be around 2.5 million tons per year (1.6 million tons in Linz and 900,000 tons in Donawitz).

In March 2022, the Supervisory Board of voestalpine AG approved initial implementation with an investment volume in the triple-digit millions of euros. The clearing of the required construction sites and infrastructural conversion work can begin immediately. In the spring of 2023, the Supervisory Board will decide on final investment approval for the two electric arc furnaces so that construction of the furnaces could begin in 2024. One milestone required for this is the startup of a 220 kV power line in Linz by the end of 2026 at the latest.

This first conversion step alone will reduce CO₂ emissions from steel production at the two Austrian sites by around 30%. This corresponds to a savings of roughly three to four million tons per year or almost 5% of all current CO₂ emissions in Austria. With an innovative raw material mix of hot metal, sponge iron and scrap as well as intelligent process controls, product qualities can be maintained as high as before despite a change in the production technology. The greentec steel strategy is also the foundation for long-term hydrogen metallurgy.

A process has also been developed by voestalpine for implementation on a large scale to support CO₂-neutral steel production without using any fossil carbons and has been granted the respective industrial property rights by the European Patent Office. This patent is valid in all the major steel-producing countries of Europe and covers the manufacturing of sponge iron in a direct reduction process that utilizes green hydrogen and biogas.



By 2050, voestalpine aims to achieve CO₂-neutral steel production by further developing greentec steel and the use of green hydrogen. A number of extensive research and development projects have been dedicated to this production technology. These include the H2FUTURE hydrogen pilot plant at the Linz site, the SuSteel test plant in Donawitz for sustainable steel production in a single process step using iron ore and hydrogen plasma, and the Hyfor project, also operated in Donawitz and using hydrogen in the reduction of ultrafine iron ores.

The conversion from fossil fuels to eco-electricity and, in the long term, hydrogen-based technologies will require costly investments as well as an increase in the amount of renewable energy. Even the first step of electric arc furnaces reduces the share of coal and coke in the energy mix in favor of electrical energy. The operation of two electric-arc furnaces will result in an additional demand for external electricity of about 2 TWh per year. The voestalpine Group currently purchases only 1.2 TWh of electricity from external sources. The vast majority is produced in-house by converting fossil process gases into electricity in the company-operated power stations.

The long-term objective of completely replacing carbon with hydrogen would increase the demand for electric power to roughly 33 TWh. 27 TWh of this amount would be required for electrolysis and the production of green steel. An additional 6 TWh would be required for downstream processing and for infrastructure.

Investment costs of roughly 1 billion euros are estimated for the first step of electrification alone. At least in the introductory phase of CO₂-reduced steel production, higher operating costs are to be expected when compared to the processes of today. Discussions with Austrian policymakers on national instruments for investment and operating cost support have been ongoing for many months.

The basic prerequisites for actual feasibility of conversion strategies are, as already described, the availability of green energy at competitive prices at the EU level as well as globally, secure and stable supply and sufficient investment volumes for the steelmaking industry. The EU plans to phase out benchmark-based free allocations are viewed critically at voestalpine: In the time period up to 2030, which is crucial for decarbonization, this would be counterproduc-

tive in conjunction with the introduction of an experimental border adjustment.

In parallel with preparations for a fundamental technology conversion, voestalpine has implemented additional measures that have been immediately effective in climate protection and resource efficiency in the 2021/22 business year. The first CO₂-reduced steel was delivered at the end of 2021. Thanks to an increased share of green electricity and an innovative raw material mix achieved by adjustments in reduction agents and the burden and by maximizing the scrap content, the carbon footprint of the greentec steel edition has been reduced by roughly 10%. The strategy will be expanded to include additional product groups in the Steel Division. The installation of photovoltaic systems on a Group-wide basis is also a major step toward further expanding our in-house generation of green electricity.

POLITICIANS HAVE SET AMBITIOUS OBJECTIVES IN THE INTEREST OF REDUCING CO₂ EMISSIONS. AT voestalpine WE WOULD LIKE TO BE PART OF THE SOLUTION. WE HAVE A CLEAR VISION FOR THIS GOAL: greentec steel!



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 CO₂-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 1,200 m³/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.

2021/22 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. Further individual measures have been developed and implemented in the respective companies.

Company	Target	Task	Figure	Deadline
voestalpine Stahl GmbH	Coking plant: BLA: Reduction of BTEX content in future excavated material	Remediation of brownfield coke plant O76 in Linz, Stage 1: Extraction of BTEX from the contaminated underground air phase in the unsaturated zone (soil extraction)	Reduction of BTEX in contaminated soil to below 50 mg/m³ RESULT: See Environmental Statement 2022, Completion of Remediation of Brownfield Coking Plant O76 in Linz	31/12/2022
voestalpine Stahl GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Direct CO₂ emissions reduced in the conventional integrated blast furnace route	Development of measures and simulation of savings in the course of a climate project based on ISO 14064	Validation and verification based on ISO 14064 and opinion statement RESULT: Validation/verification successfully implemented	31/06/2022
voestalpine Stahl GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Expansion of existing management system to include aspects of sustainability	Introduction of requirements of the industry-specific ResponsibleSteel standard at the Linz production site	External certification successfully completed RESULT: Certification successfully completed	31/05/2022
voestalpine Stahl GmbH	Reduction of consumption of industrial water in the steelmaking plant	Technical improvements in 1) service water fittings and 2) process safety achieved through control system monitoring	Process water reduced by roughly 4 million m³ per year RESULT: Reduction of approximately 3,580,000 m³ per year	30/09/2022
voestalpine Stahl GmbH	Increased resource efficiency in the use of fine coke in blast furnace A	Increased use of fine coke for further reduction of lump coke volume in blast furnace A	Lump coke reduced by approximately 18,000 tons RESULT: Lump coke reduced by approximately 18,000 tons	21/12/2021
voestalpine Stahl GmbH	Reduction of electricity and natural gas consumption based on lower startup losses	Installation of turbidity measurement for live steam at unit 07 through reduced wear in the high pressure control valve	Natural gas consumption reduced by roughly 684 MWh per year and coke gas consumption by roughly 432 MWh/year RESULT: Electrical power consumption reduced by 1,368 MWh and natural gas consumption by 864 MWh per year	01/05/2021
voestalpine Stahl GmbH	Avoided purchases of natural gas	Converter gas fed into the blast preheaters of blast furnace A	Reduction of natural gas by roughly 39,400 MWh/a and about 5,300 tons of CO₂ per year (with simultaneous increase in externally purchased electricity) RESULT: Reduction of natural gas by 78,948 MWh per year and CO₂ by 10,290 per year and simultaneous increase of electrical power purchased externally by 25,546 MWh per year	31/03/2022
Standort Steyrling	Electrical power consumption reduced in Lime Kiln Blower 7	The old blowers in Lime Kiln Blower 7 will be replaced and the motors upgraded to state of the art from IE1 to IE3. The use of the new motors results in a reduction of losses.	Electrical power consumption reduced by roughly 31 MWh per year at rated furnace capacity RESULT: Reduction was achieved of approximately 124 MWh per year	31/03/2022

Company	Target	Task	Figure	Deadline
voestalpine Giesserei Linz GmbH	Coarse-grained degenerated chromite sand reduced in residual waste landfill	Amount of residual material landfill reduced by adjusting screens and detailing analysis of the material	Reduction of residual waste volume by approximately 50 tons per year RESULT: The amount of residual waste landfilled was reduced by 160 tons per year	31/03/2022
voestalpine Giesserei Traisen GmbH & Co KG	Increased efficiency of in-house-controlled transport vehicles for inbound and outbound deliveries	Development of a planning tool	Reduction of truck transport runs by 10% RESULT: Reduced by approximately 34%	31/03/2022
voestalpine Giesserei Traisen GmbH & Co KG	Mixing ratio of resin/hardener to molded sand reduced by roughly 10%	Mixer modernized and sand management optimized	Resin and hardener consumption reduced by roughly 10% per year RESULT: Resin and hardener consumption was reduced by roughly 23.85% per year.	31/12/2022
voestalpine Camtec GmbH	Logistics optimized and number of truck transports reduced	Planning and introduction of a new logistics strategy	Savings of roughly 40% per year in diesel consumption for transports from our most important supplier RESULT: These trips were reduced only by 7.5% due to the effects of the coronavirus pandemic (material availability, delivery delays etc.)	31/03/2022
voestalpine Steel & Service Center GmbH	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 489 kWp photovoltaic system on the building roof of the shape cutting center	Generation of roughly 461 MWh of green electricity in the shape cutting center RESULT: A total of 461 MWh were generated.	31/03/2022
Logistik Service GmbH	Reduced consumption of diesel fuel on the works railway	Acquisition of an electronic shunting module (iSi robot as replacement for diesel locomotive)	Savings of approximately 43,500 liters of diesel per year Reduction of approximately 43,500 liters per year	31/03/2022
Logistik Service GmbH	Reduced consumption of diesel fuel on the works railway	Procurement of two new diesel locomotives with start-stop technology (1004.05 and .06 series)	Fuel savings of roughly 5,225 liters per year of diesel per locomotive = total savings of roughly 10,450 liters per year of diesel RESULT: Reduction of approximately 10,500 liters per year	31/03/2022
Cargo Service GmbH	Reduced railway electricity consumption	Train capacity between Steyrling and Linz increased from 17 to 20 railcars in two daily trains	Savings of additional split trains, roughly 84,280 kWh of railway electrical power per year RESULT: Reduction of approximately 52,980 kWh per year	31/03/2022
voestalpine Standort Service GmbH	Pollutant emissions reduced in emergency vehicles	Replacement of emergency vehicle powered by an internal combustion engine with one powered by an electric motor	Savings of approximately 800 liters of diesel per year RESULT: Reduction of approximately 790 liters of diesel per year	30/06/2022
voestalpine Automotive Components Linz	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	Installation of a 750 kWp photovoltaic system on the building roofs of Works 2	Generation of roughly 707 MWh of green electricity in the Works 2 RESULT: 707 MWh were generated	30/07/2022

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 m².

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. At the end of the project, conditions were created for the contaminated site to be designated as secure.

» 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/m³ to an average of < 50 mg/m³

» Phase separation

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



2022/23 ENVIRONMENTAL PROGRAM

NEW MEASURES

Company	Target	Task	Figure	Deadline
voestalpine Stahl GmbH	Calorific power reduction in MGST1 from 1.27 kWh/Nm³ to 1.24 kWh/Nm³ 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/a and about 4,700 tons of CO₂ per year (simultaneous increase in electricity purchased from external sources)	31/03/2023
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 CO₂	31/03/2023
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 per year for steam and by roughly 280,000 tons per year for process water	31/03/2023
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 per year	31/03/2023
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 m² is infiltrated into the subsoil and remains in the natural cycle (instead of precipitation water discharged into the sewer system)	31/12/2023
voestalpine Stahl GmbH	Reduction of clean water consumption in the steel-making plant	Technical improvement and pressure reduction in pure water cooling of lances	Reduction of 570 Tm³ per year of pure water and 470 MWh per year of electrical energy in pump output	31/12/2023
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%	30/09/2022
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 per year	31/03/2023
Standort Steyrling	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 per year	31/03/2023
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 roof of the foundry	Generation of roughly 1,300 MWh of green electricity in the foundry	31/03/2023
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	31/03/2023
voestalpine Giesserei Linz GmbH	Reduction of specific water consumption	Project for the optimization of cooling water consumption	Reduction of specific water consumption (below 420 m³/ton of castings)	31/03/2023
voestalpine Giesserei Traisen GmbH	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	31/03/2023
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%	31/03/2023
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	31/03/2023
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	31/03/2023



2022/23 ENVIRONMENTAL PROGRAM

NEW MEASURES



Company	Target	Task	Figure	Deadline
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	31/03/2023
voestalpine Steel & Service Center GmbH	Reduction of heating costs	New insulation of the production facility roofs above the slitting lines	Natural gas reduced by roughly 7% = 310 MWh per year	31/03/2023
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	31/03/2023
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	31/03/2023
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	31/03/2023
voestalpine Standort Service GmbH	Pollutant emissions reduced in emergency vehicles	Replacement of two emergency vehicles powered by internal combustion engines with two powered by electric motors	Gasoline savings of roughly 1,700 liters per year	31/03/2023
voestalpine Automotive Components Linz	OPERATIONALIZATION OF THE DECARBONIZATION STRATEGY Increased share of green electricity through in-house generation	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	31/03/2023
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	01/05/2022

2022/23 ENVIRONMENTAL PROGRAM

MEASURES BEING IMPLEMENTED

Company	Target	Task	Figure	Deadline
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	31/12/2022 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	31/12/2023 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	31/03/2023 Extension
voestalpine Stahl GmbH	Reduction of fuel input in annealing	Replacement of old annealing hoods with new ones	Burner gas consumption reduced by 600 MWh per year	31/12/2022
voestalpine Stahl GmbH	Reduction of precipitation discharge into sewage system and increase in underground water quantity by 10,100 m³ per 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	Construction of a infiltration system	31/12/2023 Extension
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	31/03/2023 Extension
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	31/03/2023 Extension
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 per year and CO₂ by roughly 390 tons per year	31/03/2023

2022/23 ENVIRONMENTAL PROGRAM

MEASURES NOT IMPLEMENTED

Company	Target	Task	Figure	Deadline
voestalpine Grobblech GmbH	Reduced energy consumption in heating units	Increased energy efficiency through investment in a second 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 per year and coke gas consumption by roughly 4,900 MWh per year RESULT: Investment postponed indefinitely due to current situation	31/03/2022
voestalpine Stahl GmbH	Reduction of precipitation discharge into sewage system and increase in underground water quantity by 1,680 m³ per year (introduced into natural water cycle)	Refurbishment of Alloy Storage 59: The roof surface water is no longer discharged into the sewer system but seeps into the ground.	Construction of a infiltration system RESULT: The project was not implemented as a result of space constraints	31/12/2021

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	2019 CY	2020 CY	2021 CY
Crude steel (CS)	Million tons	5.25	5.05	5.66
Products	Unit	2019 CY	2020 CY	2021 CY
Hot-rolled strip (non-slit)	Million tons	1.0	0.975	1.135
Cold-rolled strip and electrical steel		0.961	0.935	1.025
Galvanized strip		2.1	1.991	2.128
Organic-coated strip		0.2	0.181	0.192
Heavy plates		0.5	0.4	0.5
Blast furnace slag	tons	1.4	1.2	1.3
Castings in Linz		5,212.0	4,985.0	4,803.0
Castings in Traisen		6,538.9	4,432.3	5,037.0
Camtec castings		80.0	62.0	61.0
Laser-welded blanks		155,165	137,821	139,161.3
Products processed by SSC	units	1,718,992	1,618,119	1,928,660
Energy	Unit	2019 CY	2020 CY	2021 CY
Natural gas	TWh	3.57	3.22	3.17
Electric power (outside source)	TWh	0.461	0.384	0.596

Steyrling location

Products	Unit	2019 CY	2020 CY	2021 CY
Burned lime (BL)	Million tons	0.315	0.301	0.328
Armor stones		0.002	0.004	0.002
Fines (unburned)		0.618	0.669	0.646
Volume of limestone mined (LS)		1.179	1.214	1.214
Energy	Unit	2019 CY	2020 CY	2021 CY
Natural gas	GWh	308	327	321
Electric power		12	12	13

Traisen location

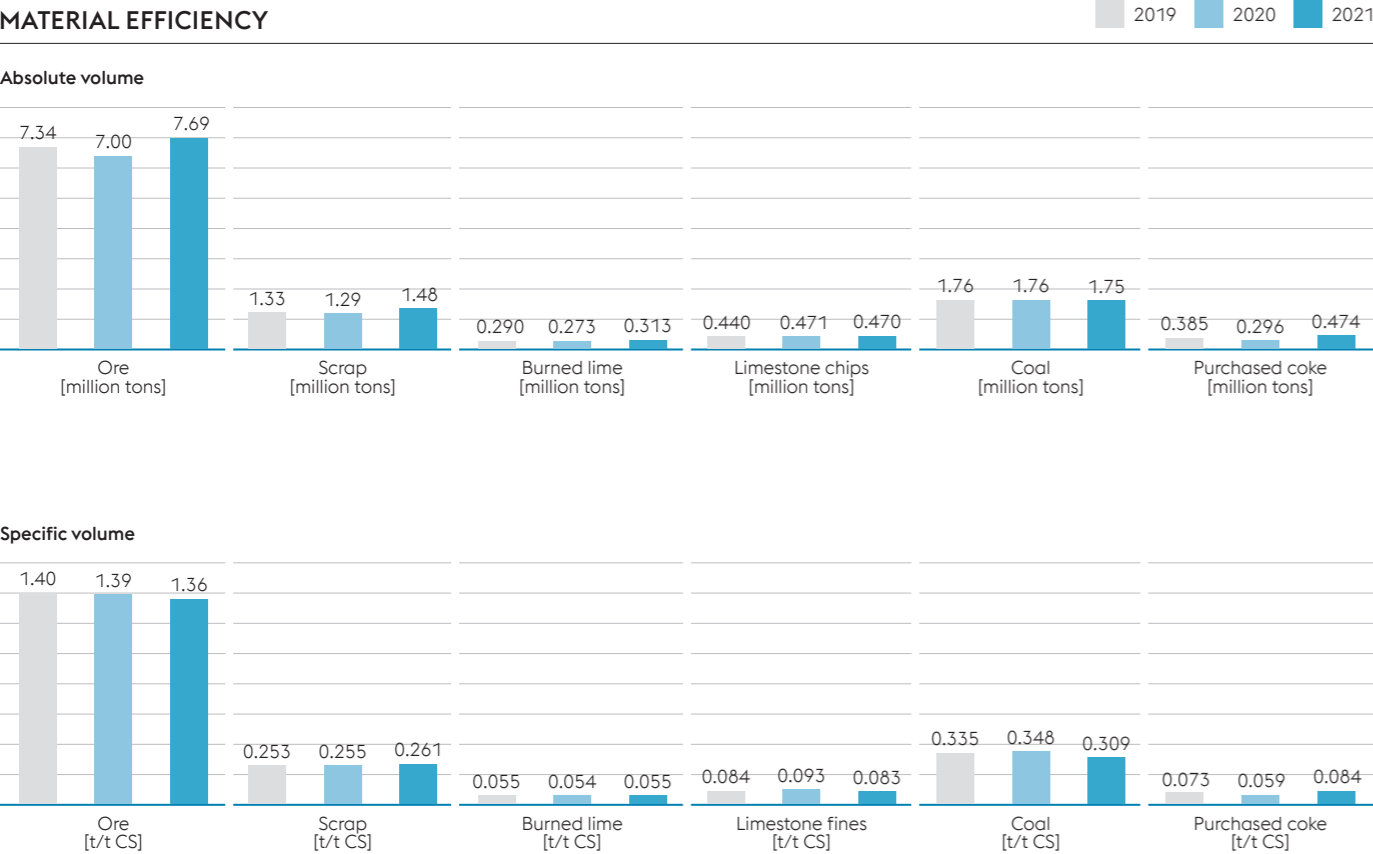
Production volume	Unit	2019 CY	2020 CY	2021 CY
Cast parts	tons	6,539	4,432	5,037.0
Cast parts	units	23,659	18,825	25,279.0



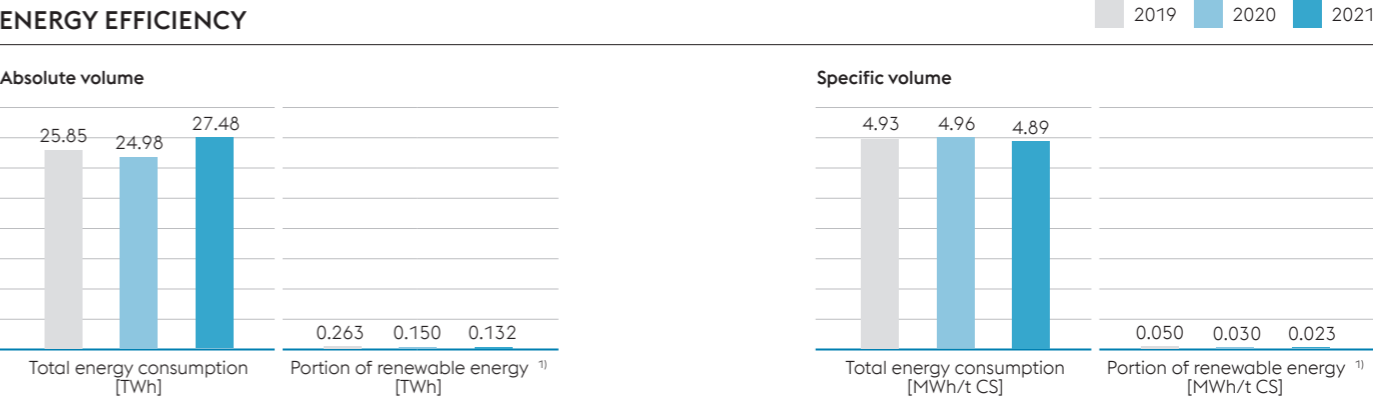
CORE INDICATORS AT THE LINZ LOCATION

The core indicators relate to total annual crude steel production. It amounted to 5.66 million tons in the 2021 calendar year (2019: 5.25 million tons, 2020: 5.05 million tons).

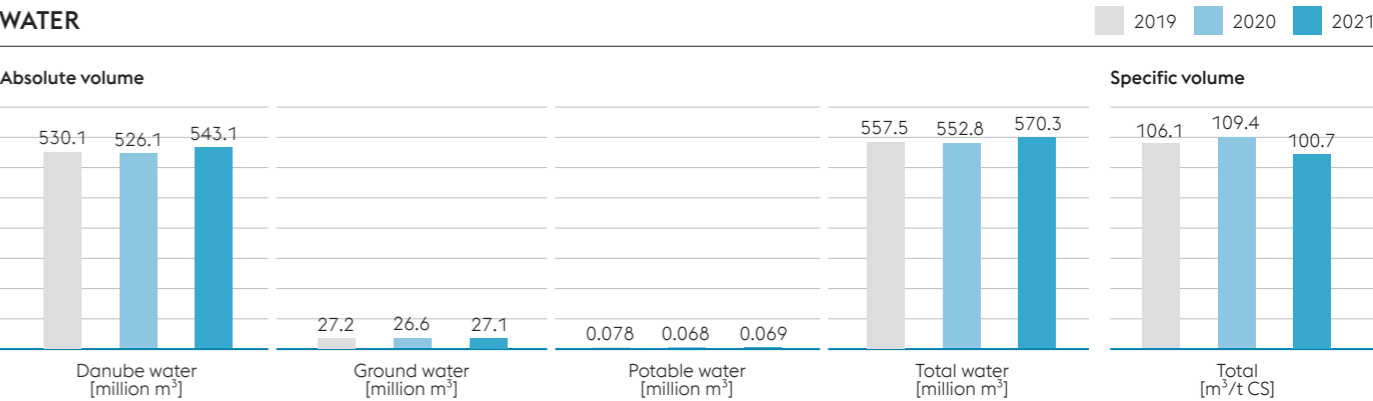
MATERIAL EFFICIENCY



ENERGY EFFICIENCY



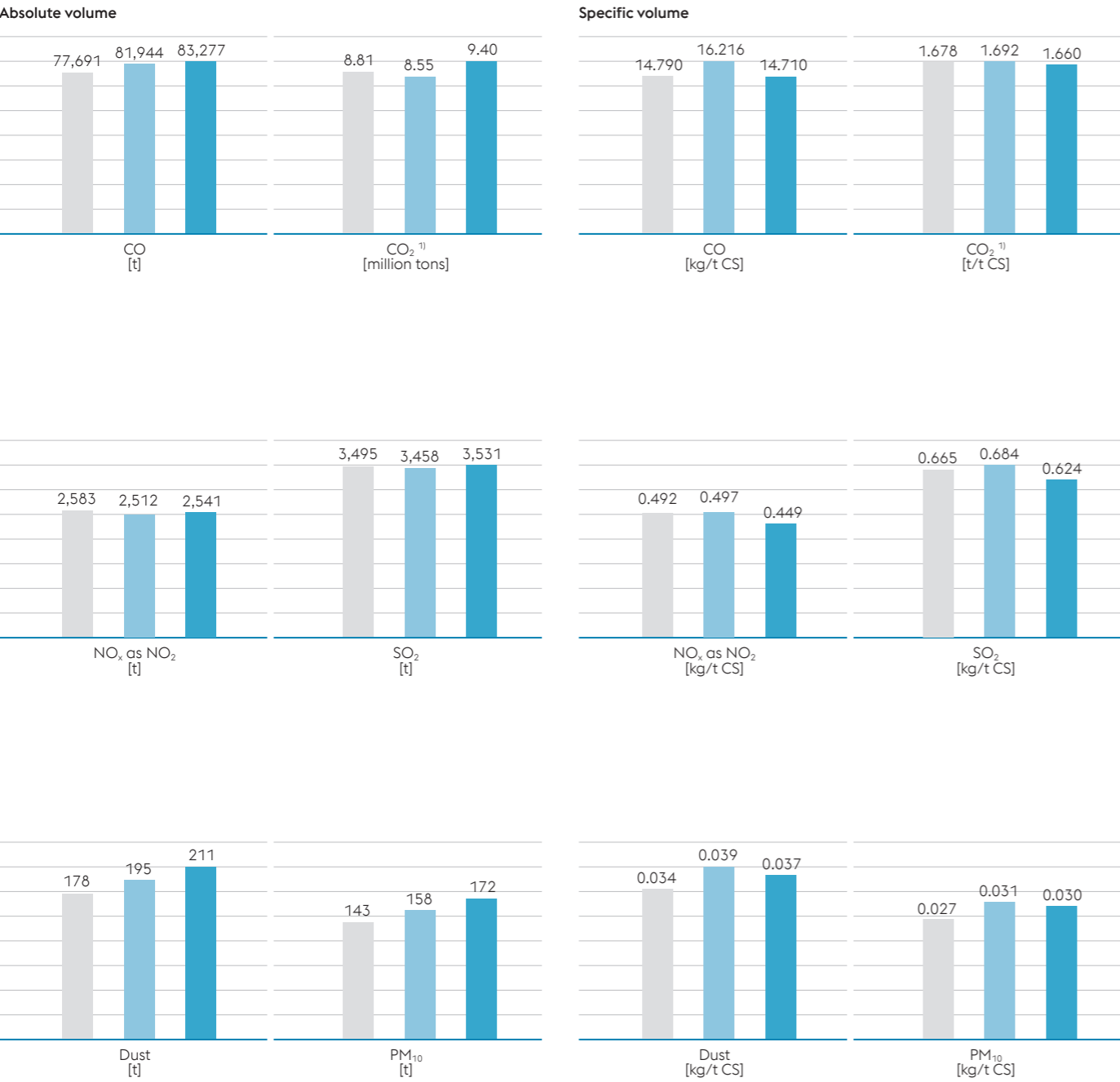
WATER



¹⁾ Increased proportion of renewable energies with respect to electricity labeling from purchased third-party electricity. This reflects the following for the 2021 calendar year: water power (2.58%), solid biomass (7.21%), liquid biomass (0.01%), biogas (1.00%), wind energy (9.56%), photovoltaic power (1.65%), waste containing a high percentage of biogenic materials (0.16%), landfill gas (0.01%), sewage gas (0.01%) and geothermal energy (< 0.01%).

CORE INDICATORS AT THE LINZ LOCATION

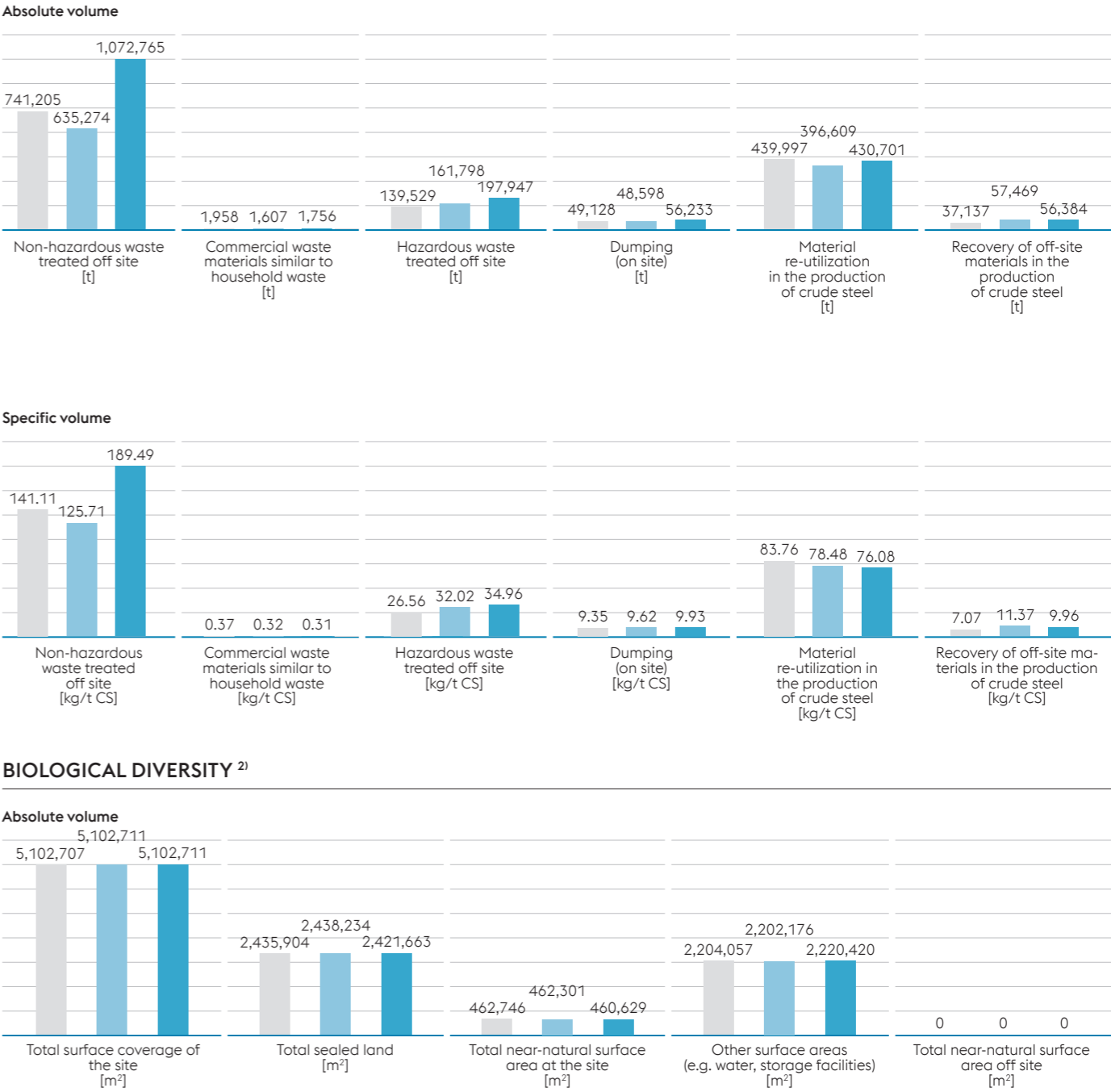
EMISSIONS



Other greenhouse gases such as methane and substances that deplete the ozone layer are emitted in only small amounts (roughly 45 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)

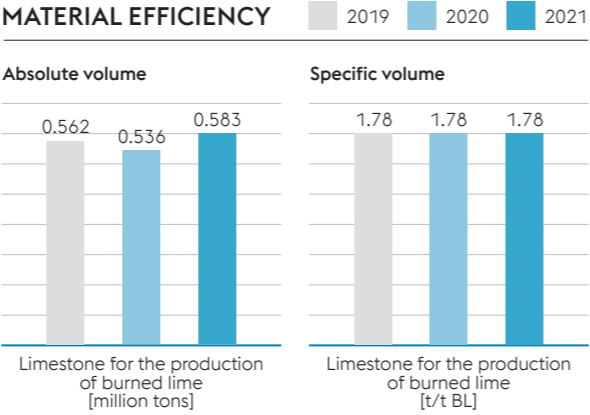
WASTE



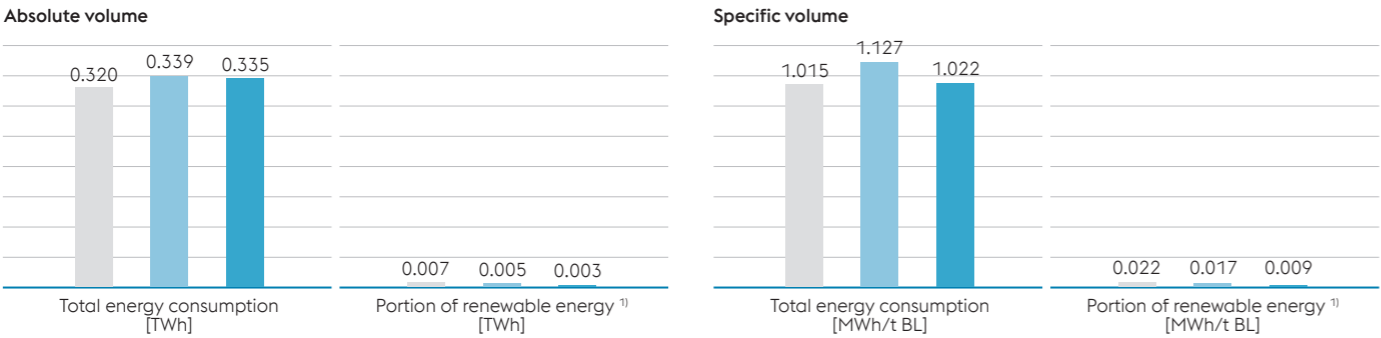
²⁾ The core biological diversity indicator refers to the surface area of the works premises at the Linz location as registered in the land registry in April 2021 and is the actual value.

CORE INDICATORS AT THE STEYRLING LOCATION

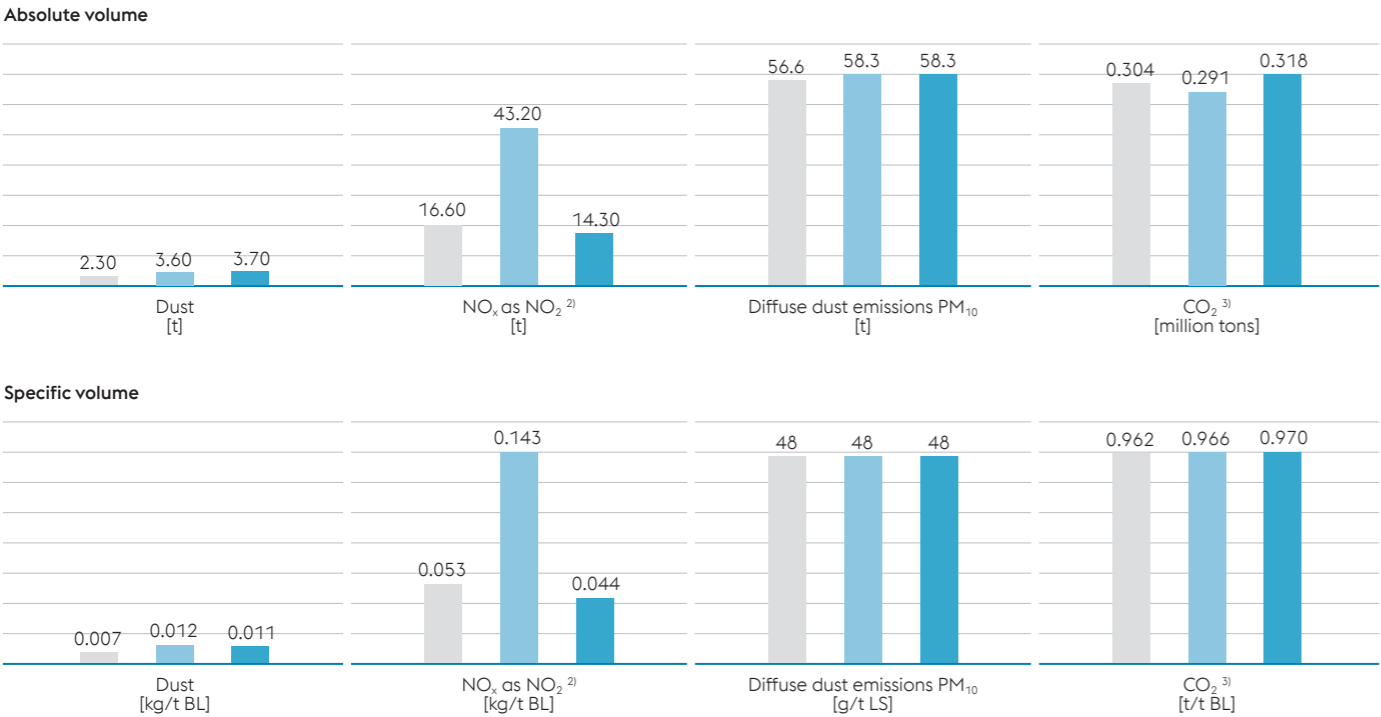
The core indicators refer to total annual burned lime production. In the 2021 calendar year, the value was 0.33 million tons. In 2019 it was 0.32 million tons, 2020: 0.30 million tons.



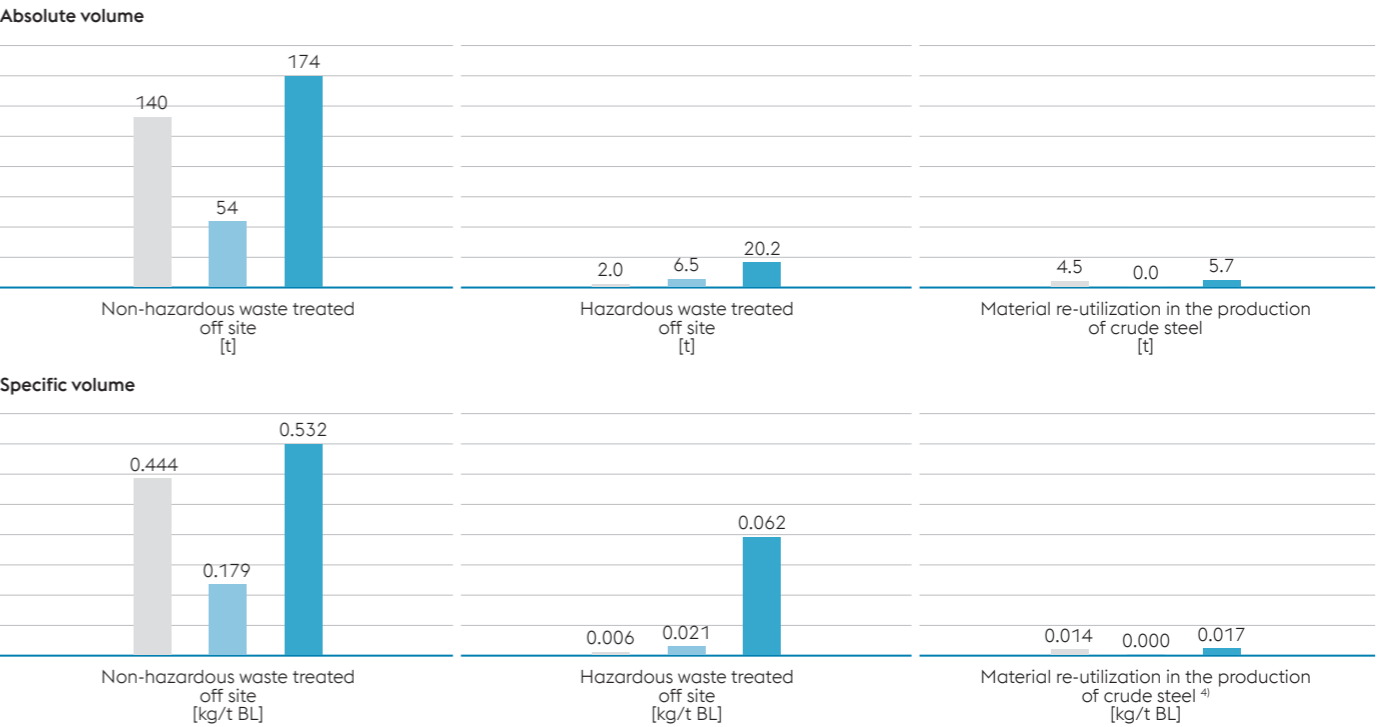
ENERGY EFFICIENCY



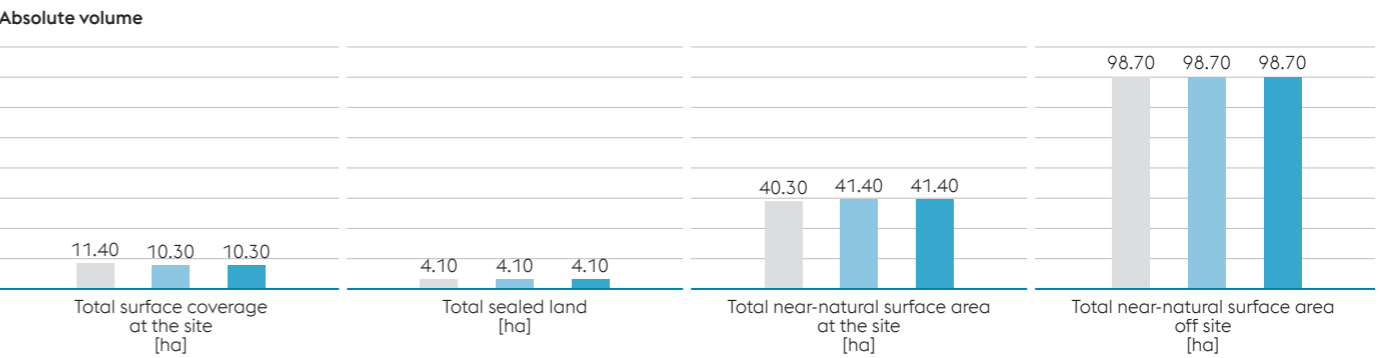
EMISSIONS



WASTE



BIOLOGICAL DIVERSITY ⁵⁾



¹⁾ Increased proportion of renewable energies with respect to electricity labeling from purchased third-party electricity. This reflects the following for the 2021 calendar year: water power (2.58%), solid biomass (7.21%), liquid biomass (0.01%), biogas (1.00%), wind energy (9.56%), photovoltaic power (1.65%), waste containing a high percentage of biogenic materials (0.16%), landfill gas (0.01%), sewage gas (0.01%) and geothermal energy (< 0.01%).

²⁾ Emissions from lime furnaces

³⁾ Verified volume under EU emissions allowance trading, Attachment I (direct emissions)

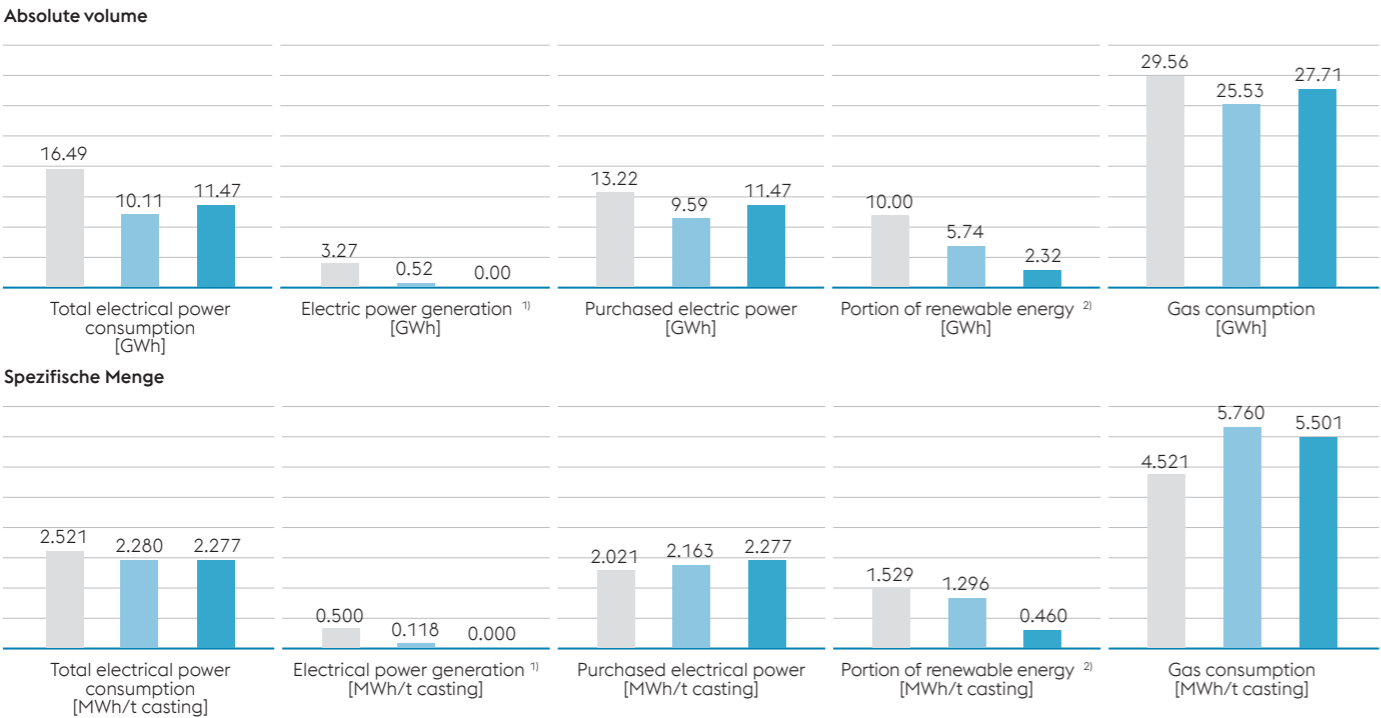
⁴⁾ Material recycling at the Linz location

⁵⁾ The core biological diversity indicator refers to the surface of the works premises at the Steyrling location as April in the land registry in April 2021 and is the actual value.

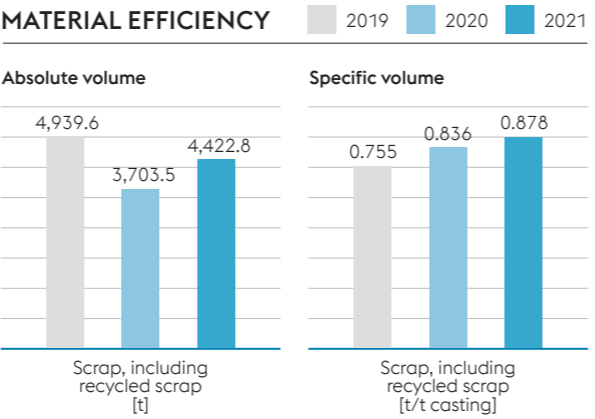
CORE INDICATORS AT THE TRAISEN LOCATION

The core indicators refer to total annual casting production. In the 2021 calendar year, the volume was 4,432 tons. In 2019 it was 8,361 tons. In 2020 it was 4,432).

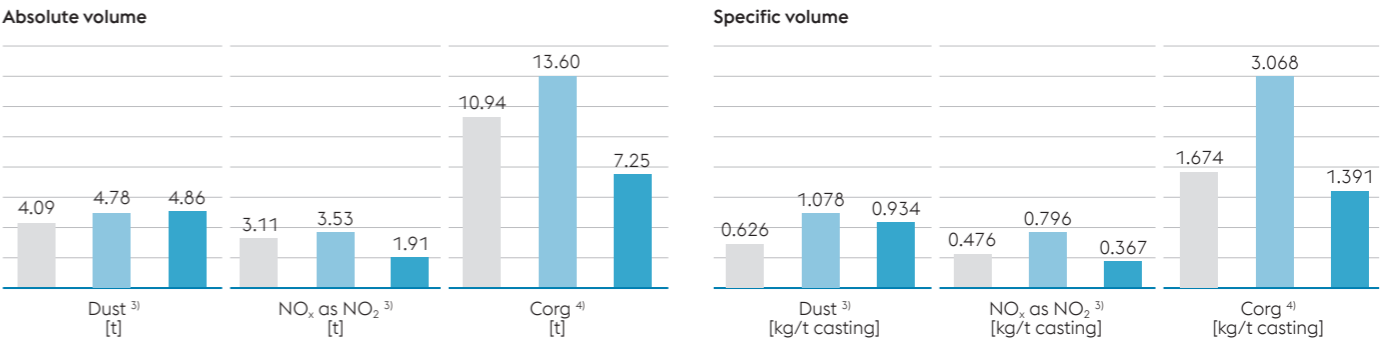
ENERGY EFFICIENCY



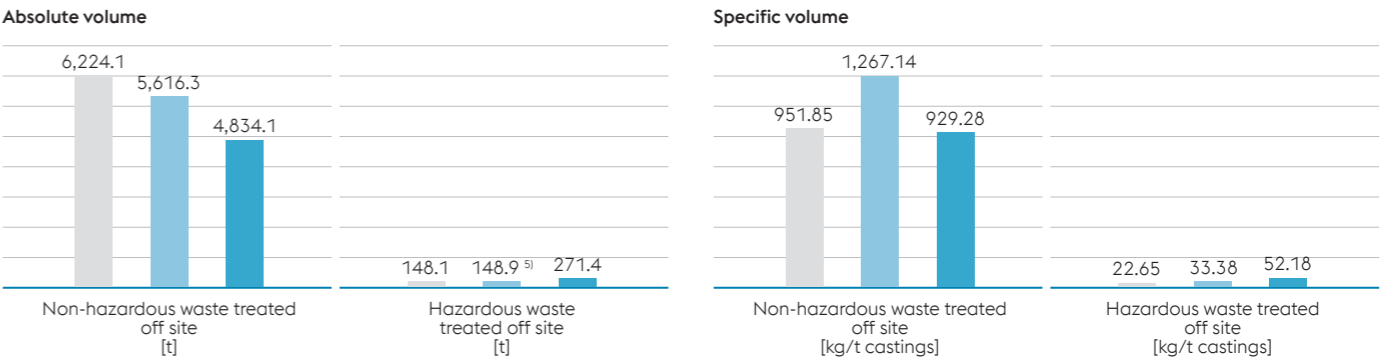
WATER



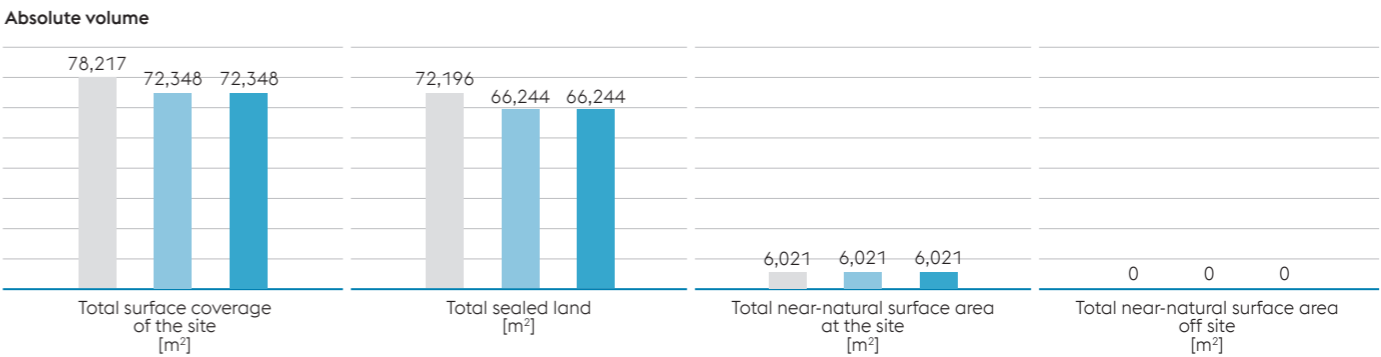
EMISSIONS



WASTE



BIOLOGICAL DIVERSITY ⁶⁾

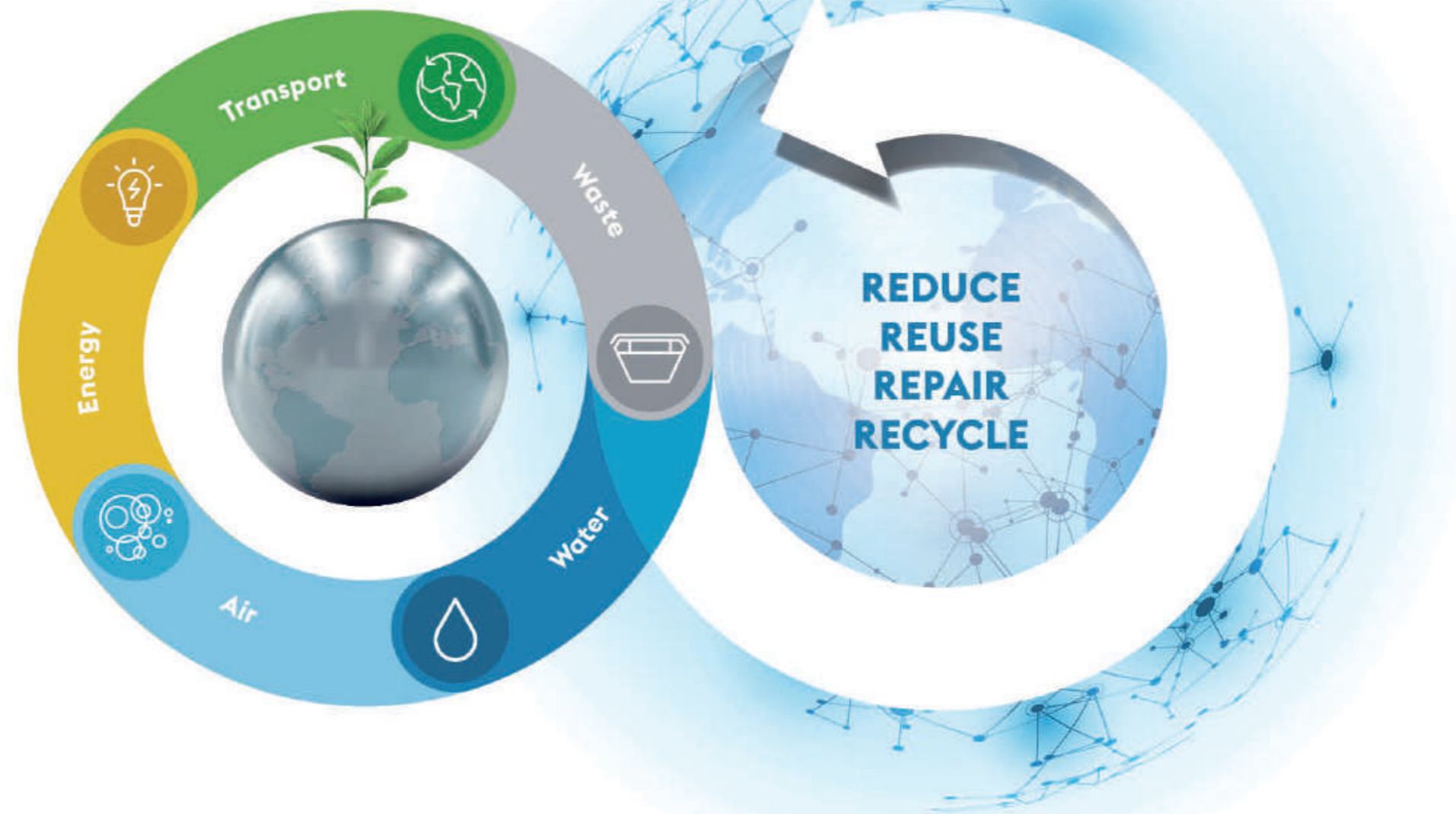


¹⁾ In-house power generation was completely outsourced.
²⁾ Determination of share of renewable energies based on official disclosure arising from purchased external electric power and electricity generated by the two hydro-power plants. Externally supplied electricity was generated during the 2021 calendar year (product residual mix) by means of water power (2.58%), wind energy (9.56%), solid biomass (7.21%), photovoltaics (1.65%), other eco-energies (0.20%), natural gas (73.22%) and other sources (4.58%).

³⁾ Emissions from production systems
⁴⁾ From annealing furnace/bogie hearth furnace
⁵⁾ Value updated
⁶⁾ The core biological diversity indicator refers to the surface of the works premises at the Traisen location in the land registry in August 2021 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 CO₂ 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 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 tool at voestalpine for the determination and communication of the environmental impact of products based on a lifecycle assessment. 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, for example hot-rolled steel strip, hot-dip galvanized steel strip, hot-formed steel pressed parts, prestressed concrete turnout sleepers, rails and seamless pipes, 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 CO₂-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 CO₂-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 CO₂ Reduced Steel project at the Linz site. The aim is to reduce direct CO₂ 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.



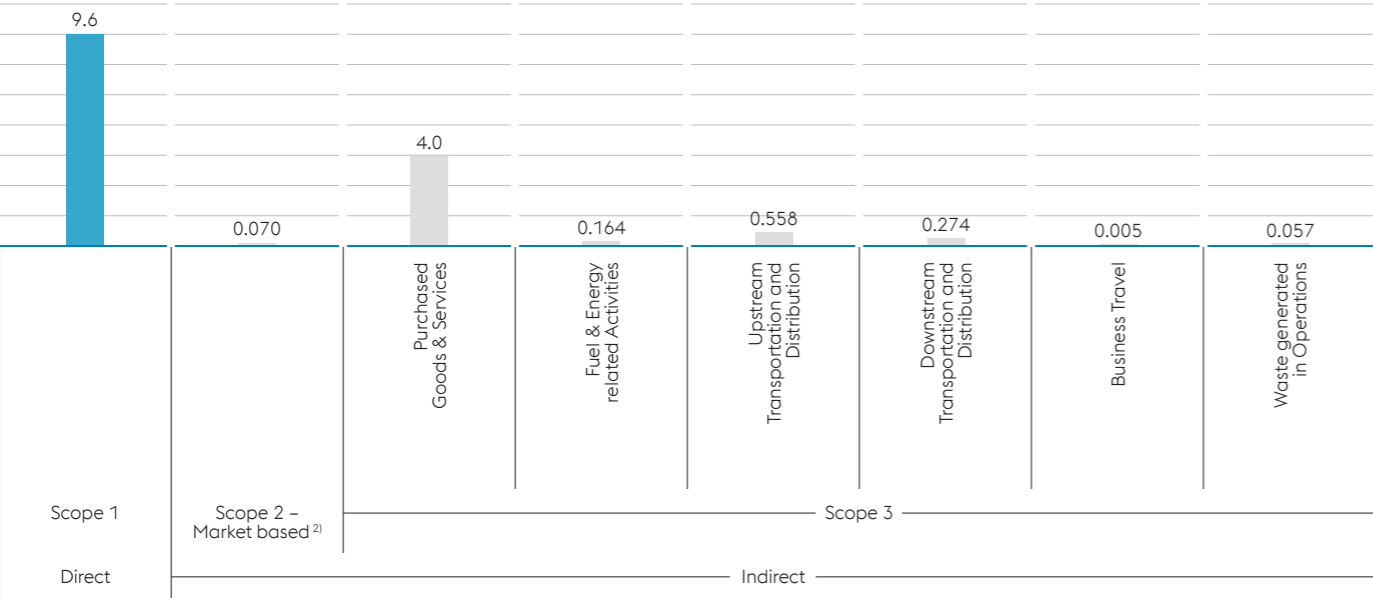
DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS IN 2021

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:

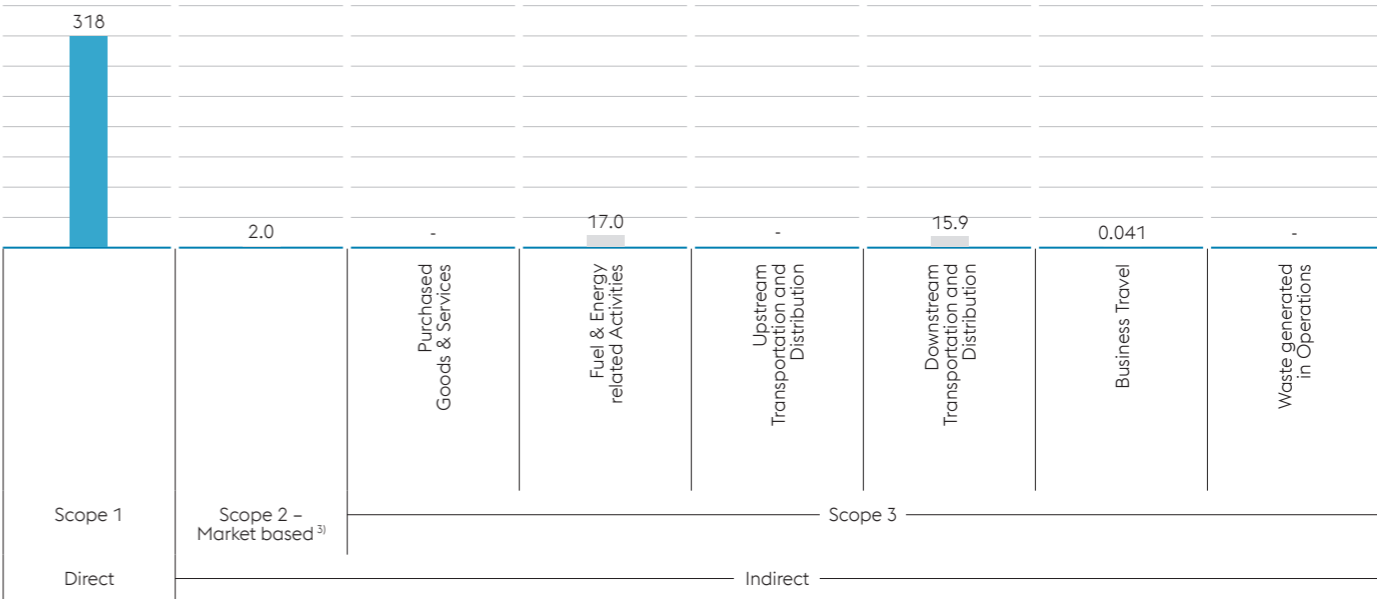
DIRECT AND INDIRECT GHG EMISSIONS AT THE LINZ SITE

in [million tons CO₂e] (CO₂ equivalent)



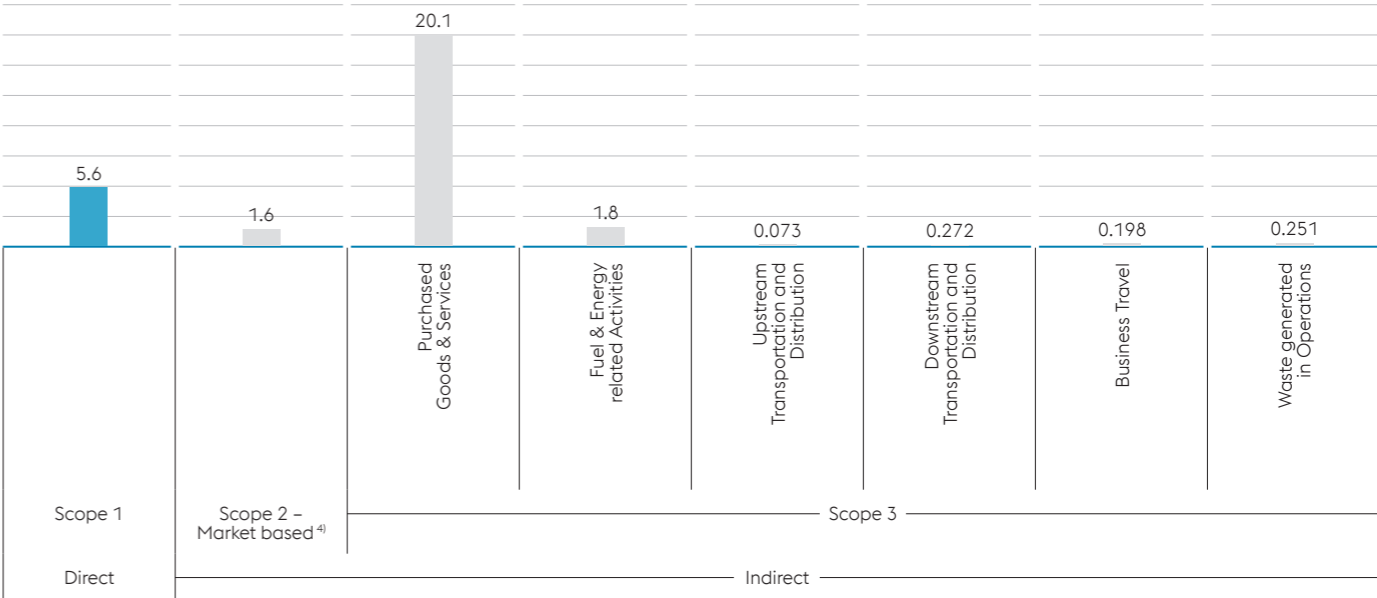
DIRECT AND INDIRECT GHG EMISSIONS AT THE STEYRLING SITE

in [1,000 metric tons CO₂e] (CO₂ equivalent)



DIRECT AND INDIRECT GHG EMISSIONS AT THE TRAISEN SITE

in [1,000 metric tons CO₂e] (CO₂ equivalent)



In order to reach the Paris climate targets, voestalpine Stahl GmbH has launched the CO₂-Reduced Steel climate project as part of a comprehensive decarbonization strategy at the Linz site. The objective is to reduce direct CO₂ 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 CO₂ quantities. Scope 1, 2 and 3 stated here, however, were not verified by EMAS.
²⁾ Scope 2 – Location based: 0.128 million tons CO₂e

³⁾ Scope 2 – Location based: 3,5 Tsd. t CO₂e
⁴⁾ Scope 2 – Location based: 3,0 Tsd. t CO₂e



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





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

ENVIRONMENTAL FOCUS ON AIR

The reduction of emissions is an essential target. The results are highly 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. SO₂ and NO_x were also reduced by 75% and CO₂ 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.

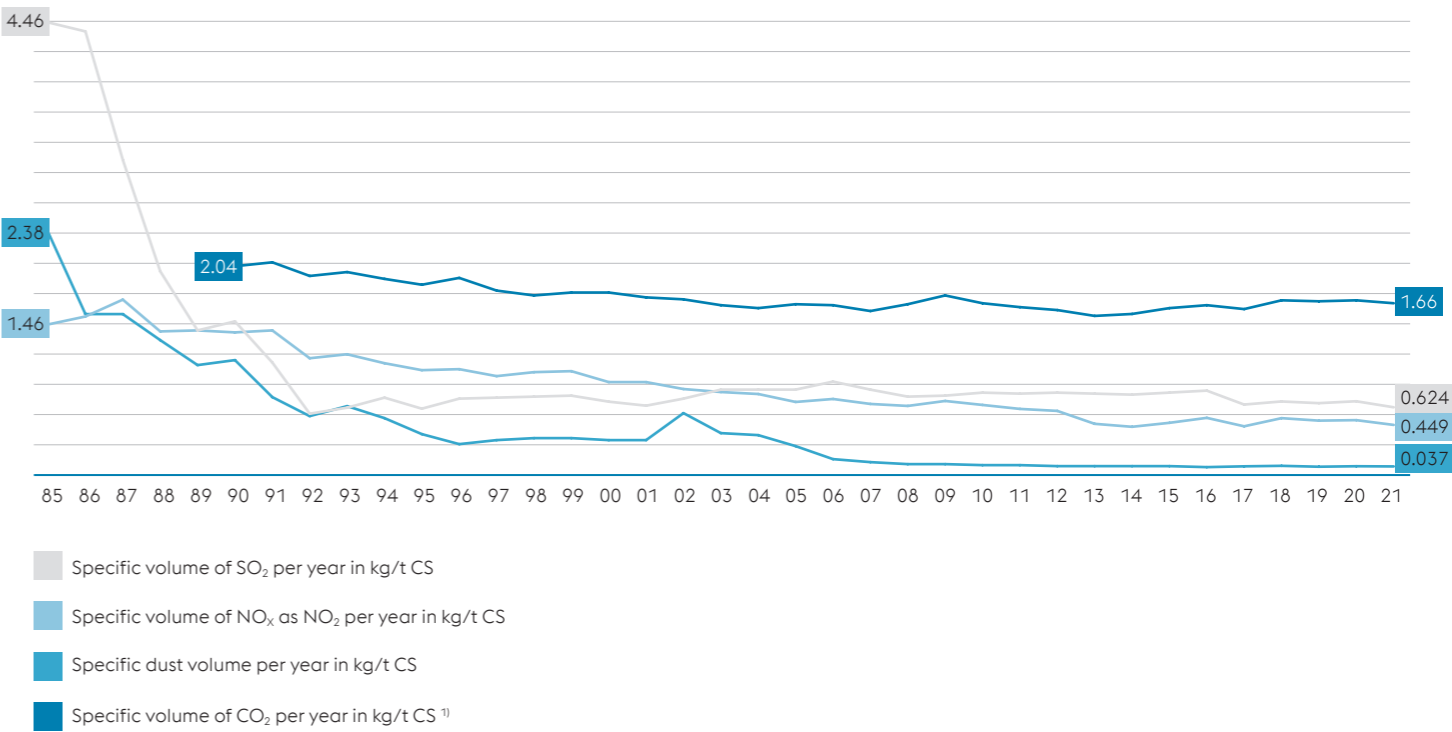
The voestalpine foundry at the Traisen location takes effective air pollution control measures to sustainably improve the air quality, meet legal obligations and pursue its own interests. Best available technologies are implemented to achieve the best results.

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.

EMISSION 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	2019 CY	2020 CY	2021 CY
Power station	Generating Unit 06	100	80	73	74
	Generating Unit 03	100	42	48	51
	Generating Unit 04	100	51	42	31
	Generating Unit 05	100	49	52	40
	Generating Unit 07	100	50	56	60
Blast furnace blower station	Gas and steam turbine	33	28	28	18
	Central blower station 2, boiler 1	100	1	2	3
	Central blower station 2, boiler 2	100	3	6	5
Hot-rolling mill	Pusher-type furnace 06	400 ¹⁾	292	255	253
	Pusher-type furnace 07	350 ²⁾	209	212	173
	Walking-beam furnace 1	220 ³⁾	114	120	101
Sintering plant	Sinter belt 5	150 ⁴⁾	86	89	85
Cold-rolling mill	Hot-dip galvanizing line III	250	88	97	142
	Hot-dip galvanizing line IV	250	101	101	122
	Hot-dip galvanizing line V	250	155	139	101
Heavy plates	Pusher-type furnace 1	500	398	385	369
	Pusher-type furnace 2	300 ⁵⁾	172	154	151

SO ₂	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Power station	Generating Unit 06	200	71	83	64
	Generating Unit 03	200	96	89	81
	Generating Unit 04	200	111	103	80
	Generating Unit 05	200	97	89	77
	Generating Unit 07	200	99	91	81
Blast furnace	Gas and steam turbine	67	32	26	27
	Casting bay dedusting (BF A)	350	80	117	114
	Secondary dedusting 1	101.5 ⁶⁾	22	24	44
Hot-rolling mill	Pusher-type furnace 06	200	125	106	142
	Pusher-type furnace 07	200	53	52	65
Coking plant	Sulfuric acid and gas cleaning system	1,000 ⁷⁾	372	354	392
Sintering plant	Sinter belt 5	350	296	293	293
Heavy plates	Pusher-type furnace 1	200	120	123	132

CO	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Power station	Generating Unit 03	100	6.6	6.4	4.6
	Generating Unit 04	80	13.3	18.9	26.5
	Generating Unit 05	80	10.6	11.2	16.6
	Generating Unit 07	80	8.8	3.9	5.9
	Gas and steam turbine	33	3.8	9.3	8.2
Blast furnace	Central blower station 2, boiler 1	80	3.7	1.3	0.2
	Central blower station 2, boiler 2	80	4.5	1.0	1.0
Coil coating line	Coil coating line 1	100	1.0	1.2	1.3
	Coil coating line 2	100	6.9	7.3	6.1

C.org	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Coil coating line	Coil coating line 1	30	1.7	1.4	1.6
	Coil coating line 2	30	3.7	3.9	4.0

H ₂ S ⁸⁾	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Coking plant		500	274	285	303

HF	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Sintering plant	Sinter belt 5	3.0	0.7	0.3	1.5

Hg	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Sintering plant	Sinter belt 5	0.050	0.042	0.043	0.043

Dust	Production line	Half-hour average value (mg/Nm³)	Measured annual average value (mg/Nm³)		
		Limit value	2019 CY	2020 CY	2021 CY
Blast furnace	Casting bay dedusting (BF A)	10	3.7	4.4	4.7
	Casting bay dedusting system (BF 5 and 6)	10	1.1	0.5	0.3
Sintering plant	Sinter belt 5	10	2.4	2.5	3.7
	Sinter plant dedusting	10	1.9	3.9	4.7
	Sinter crusher and screening unit (SIBUS)	10	1.7	1.9	1.7
LD steelmaking plant	Secondary dedusting 1	10	4.8	5.6	3.8
	Secondary dedusting 2.1	10	2.3	2.4	3
	Secondary dedusting 2.2	10	0.4	0.9	2.1
	Secondary dedusting 3.1	10	0.1	0.1	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.
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⁾ Pusher-type furnace 2: additional limitation of daily mean values for NO_x of 200 mg/Nm³.
³⁾ HBO 1: additional limitation of daily mean values for NO_x of 130 mg/Nm³. ⁴⁾ SO₂ limit values in kg/h.
⁴⁾ Sinter belt No. 5: additional limitation of daily mean values for NO_x of 100 mg/Nm³. ⁷⁾ There is also a fraction limit value of 150 kg SO₂/day under normal operating conditions.

All emission sources are continuously monitored. The data refer to the respective calendar year.
⁸⁾ H₂S is contained in the coke gas that is energetically utilized in other process steps. Emissions only occur as SO₂.

Emission measurements at the Steyrling location

NO _x as NO ₂	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
Steyrling Lime Plant	Furnace 4	300	Stand By	Stand By	13.3
	Furnace 5	300	15.7	39.3	13
	Furnace 6	300	23.7	44	16.3
	Furnace 7	300	22	46.7	¹⁾
CO	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
Steyrling Lime Plant	Furnace 4	150	Stand By	Stand By	5.3
	Furnace 5	150	8	6	8.3
	Furnace 6	150	12.7	12.3	9
	Furnace 7	150	10.3	10.7	¹⁾
SO ₂	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
Steyrling Lime Plant	Furnace 4	100	Stand By	Stand By	< NWG ²⁾
	Furnace 5	100	< NWG ²⁾	< NWG ²⁾	< NWG ²⁾
	Furnace 6	100	< NWG ²⁾	< NWG ²⁾	< NWG ²⁾
	Furnace 7	100	< NWG ²⁾	< NWG ²⁾	¹⁾
C.org	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
Steyrling Lime Plant	Furnace 4	30	Stand By	Stand By	4.7
	Furnace 5	30	8.3	13.7	4.3
	Furnace 6	30	10.7	3.7	2.3
	Furnace 7	30	9.7	9.3	¹⁾
Staub	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
Steyrling Lime Plant	Furnace 4	10	Stand By	Stand By	7.3
	Furnace 5	10	0.9	5.6	5.9
	Furnace 6	10	1.4	0.5	0.3
	Furnace 7	10	0.3	1	¹⁾
	Furnace discharge 4	10	Stand By	³⁾	³⁾
	Furnace discharge 5	10	0.8	³⁾	³⁾
	Furnace discharge 6	10	1.3	³⁾	³⁾
	Furnace discharge 7	10	1.2	³⁾	³⁾
	Lime extraction	10	7.8	³⁾	³⁾
	Lime extraction	10	0.5	³⁾	³⁾

¹⁾ Modernization of lime furnace 7 furnace, no measurements taken
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)		
			2019 CY	2020 CY	2021 CY
voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	10	¹⁾	¹⁾	0.1
	Mixer 1, molding line	10	9.5	¹⁾	¹⁾
	AAF Halle 3	10	4.5	¹⁾	¹⁾
NO _x as NO ₂	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
voestalpine Giesserei Traisen GmbH & Co KG	Annealing Furnace 6	350 (at < 800 °C)	317	¹⁾	¹⁾
	Annealing Furnace 7	350 (at < 800 °C)	¹⁾	¹⁾	210
	Annealing Furnace 9	350 (at < 800 °C)	¹⁾	¹⁾	117
C.org	Production line	Limit value (mg/Nm³)	Measured value (mg/Nm³)		
			2019 CY	2020 CY	2021 CY
voestalpine Giesserei Traisen GmbH & Co KG	Dedusting in the melting plant	50	¹⁾	¹⁾	<NWG ²⁾
	Mixer 1, molding line	20 (materials of Class 1)	<0.1	¹⁾	¹⁾
		100 (materials of Class 2)	44	¹⁾	¹⁾
		150 (materials of Class 3)	44	¹⁾	¹⁾
	AAF Bay 3	20 (materials of Class 1)	6.3	¹⁾	¹⁾
		100 (materials of Class 2)	6.3	¹⁾	¹⁾
		150 (materials of Class 3)	6.3	¹⁾	¹⁾

¹⁾ Measurement interval every 3 years, next measurement in the 2022 CY
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. Roughly 80% of the electrical energy at the Linz location 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



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 projects to larger, overarching measures such as the use of converter gas in the blast preheaters of Blast Furnace A. These and many other measures have saved more than 63,000 MWh in the 2021 calendar year.

ENVIRONMENTAL FOCUS ON WATER

Circular economy.

89%

Total water consumption at the Linz location amounted in 2021 to roughly 570 million cubic meters, of which roughly 89% (a total of 507 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.

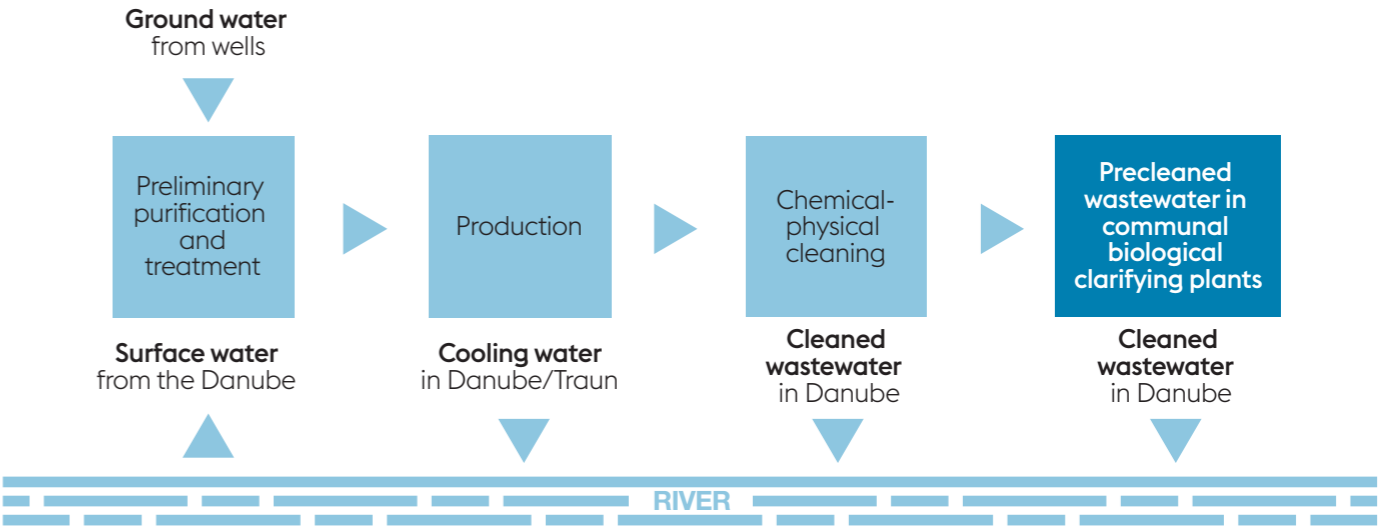
A total of 507 million cubic meters of water were pumped from the Danube in the 2021 calendar year at the Linz location. This cooling water is channeled back into the Danube in compliance with the defined temperature limit values. Depending on the wastewater constituents, was either cleaned before returning 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).

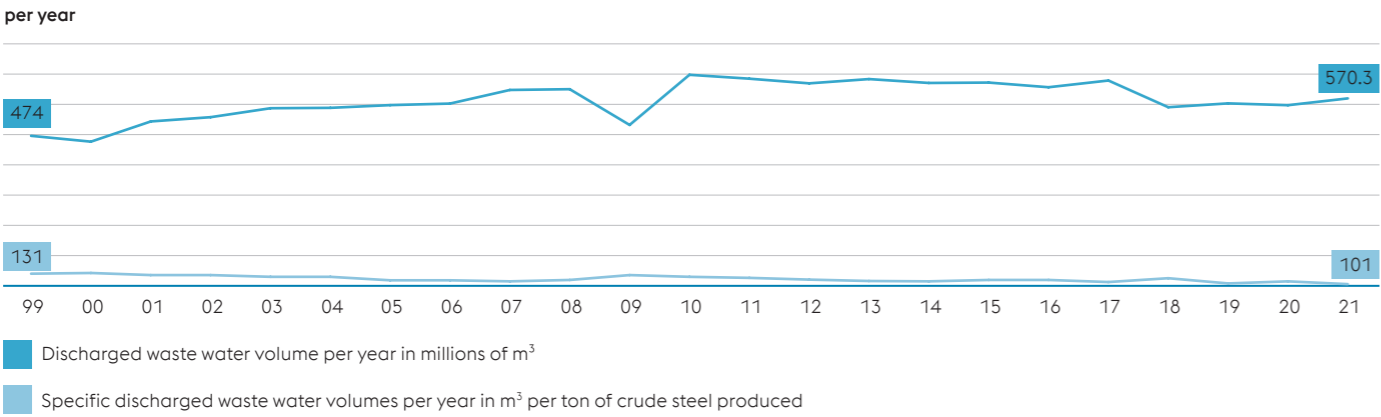
CAREFUL TREATMENT
OF WATER AS A NATURAL
RESOURCE IS REGARDED
AS A FUNDAMENTAL
PRIORITY AT voestalpine.



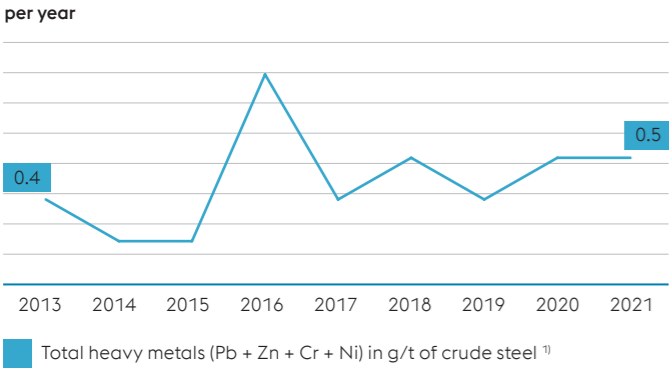
Trends in discharged waste water volumes

In the 2021 calendar year, the amount of discharged water amounted to 101 m³ per ton of crude steel.

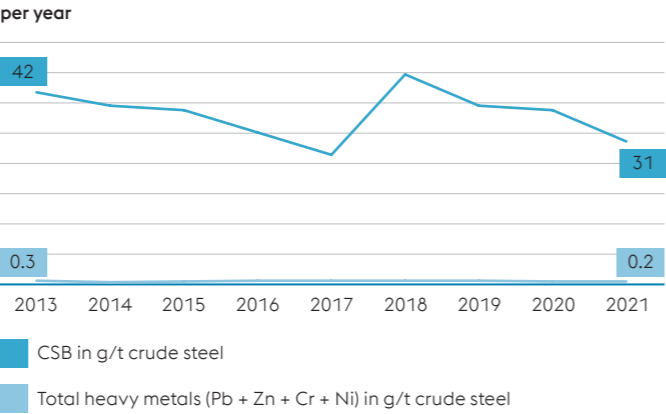
WATER DISCHARGE VOLUMES



SPECIFIC DISCHARGE INTO DANUBE



DISCHARGE INTO MUNICIPAL WASTEWATER TREATMENT PLANT



¹⁾ minus initial load from Danube

ENVIRONMENTAL FOCUS ON WASTE

The objective is to reduce and reuse waste.

89%

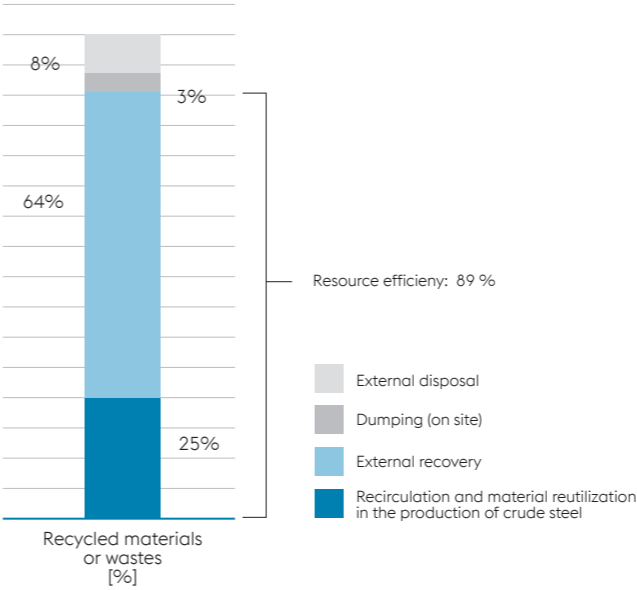
Material recycling and the portion of re-used waste materials in total amount to a resource efficiency of 89% with respect to all waste processed off site and on site.



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

RESOURCE EFFICIENCY

Recyclable and waste materials incurred at the Linz location



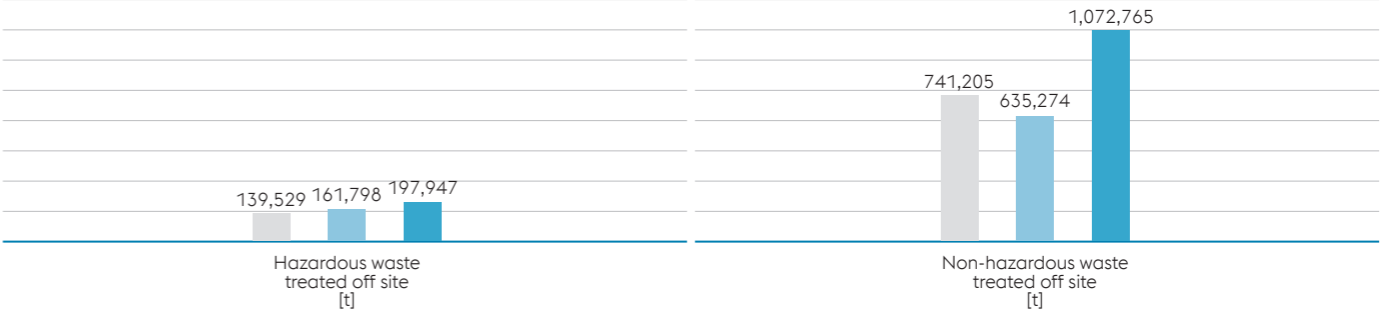
In the 2021 calendar year, roughly 25% of the recycled materials and waste incurred at the Linz location were re-utilized, thus increasing resource efficiency in production processes. (This value increases to 47% when in-house scrap recycling is taken into account.)

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

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

WASTE

Waste treated off site



ENVIRONMENTAL FOCUS ON TRANSPORTS

More rail, less road.

56%

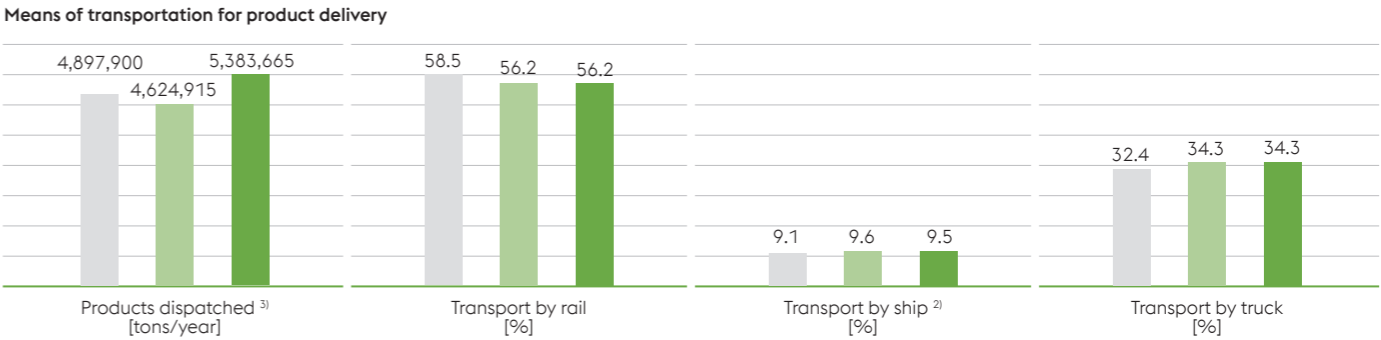
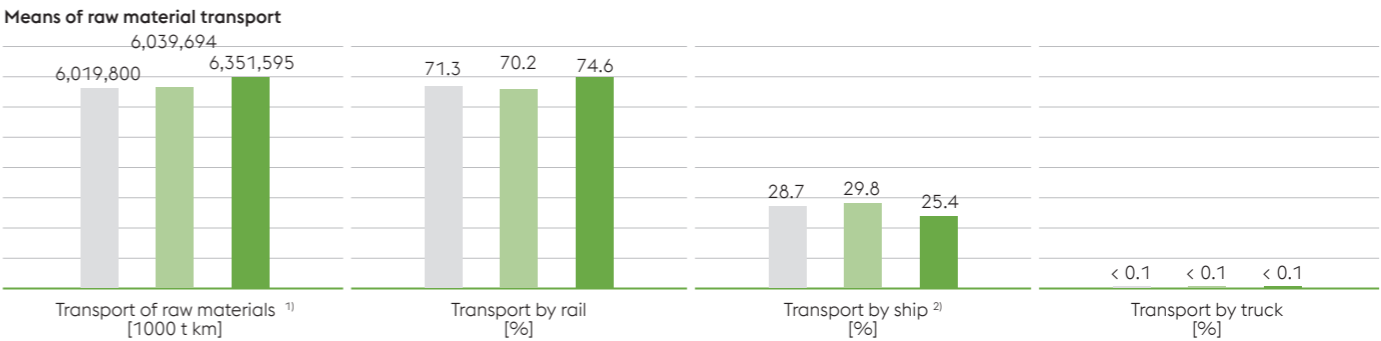
56.2% of the products are delivered by rail. In the case of raw materials, the figure is even as high as 75% by rail, 25% by ship and less than 0.1% by truck (Linz location, 2021).



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 2021 calendar year:

LOGSERV + CARGOSERV RAW MATERIAL TRANSPORTS AT THE LINZ AND STEYRLING LOCATIONS 2019 2020 2021



The definition of diffuse emissions is difficult to impossible because of the large number of different kinds of transport routes, including those on the railway, waterway and roadway, 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. A project is being carried out to establish and manage multiple bee colonies at the production site. Biotopes have been created for the European green toads.

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.

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.



SAFETY TAKES HIGHEST PRIORITY SEVESO PRODUCTION SYSTEMS

External emergency plan

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

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

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

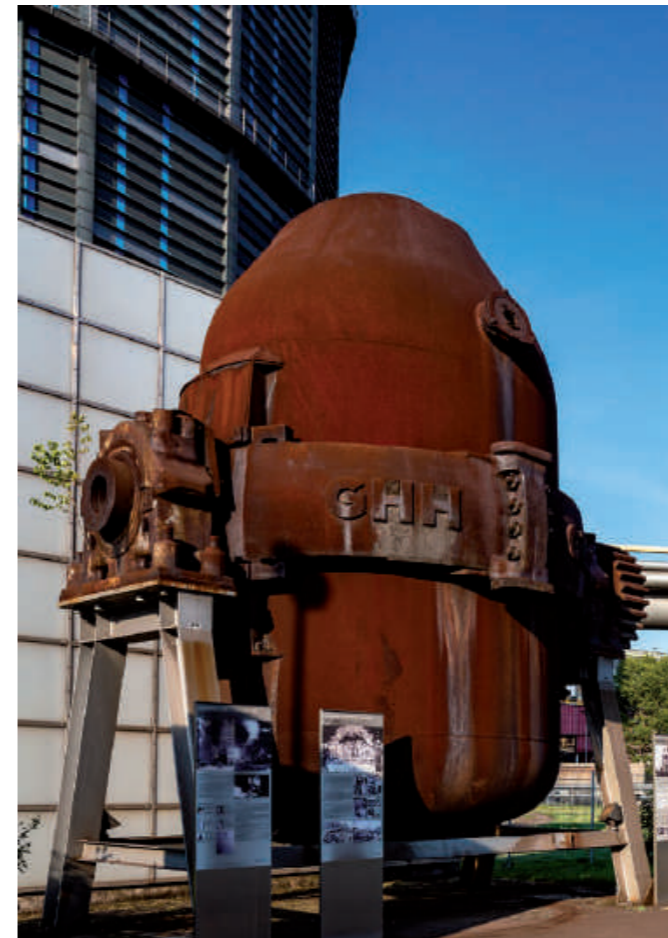
The precautions to be taken to prevent and limit industrial accidents are set forth in the Industrial Accident Act. Because of the comprehensive safety measures that have been taken for many years in production, the probability of neighbors being affected by an industrial accident is very low. An industrial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

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

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

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

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



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

The authorities have been notified pursuant to Section 84d of the Trade and Industrial Code. Corresponding safety reports have been submitted to the authorities (Municipal Offices of the Provincial Capital City of Linz, Office of the Upper Austrian Provincial Government). These reports are regularly updated and are available for review. 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 m³ 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 differs chemically 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 PIPES 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 (CaC ₂):	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% CaC₂) in reaction with water yields roughly 258 standard cubic meters of acetylene gas.

MEASURES

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

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

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

EXTERNAL EMERGENCY PLAN

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

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

Warning

The public is warned by means of sirens in the event of an extraordinary incident. Industrial accidents on the premises of 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 bzw. +43/50304/15-2629
Environmental Department: T. +43/50304/15-9806
Occupational Safety Department: T. +43/50304/15-9806
Linde Gas GmbH: T. +43/50/4273-1616

Link to Environmental Report on the Internet

www.voestalpine.com/stahl/Die-Steel-Division/Umwelt

POTENTIAL HAZARDS
AND COMPREHENSIVE
EMERGENCY PLANS ON
THE WORKS PREMISES

INFORMATION, CONTACT AND ABOUT US



Environmental report

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

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

Registry number: AT-000216

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