ENVIRONMENTAL DECLARATION 2025

Including sustainability magazine

voestalpine Tubulars GmbH & Co KG
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ENVIRONMENTAL DECLARATION 2025

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voestalpine Tubulars GmbH & Co KG
Kindberg Site

Consolidated Environmental Declaration 2025 in accordance with the EMAS Regulation (Regulation (EC) 1221/2009 & Regulation (EU) 2017/1505 & Regulation (EU) 2018/2026) of the Council on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

NACE code:	24.20
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Contact

Dipl.-Ing. Harald Kohlhofer

Environmental Officer

Alpinestrasse 17, 8652 Kindberg, Austria

Telephone: +43 (0) 50304 23-366

E-mail: harald.kohlhofer@vatubulars.com

Website: www.voestalpine.com/tubulars

Content not validated by the EMAS auditor

Kindberg, March 2025

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1 MANAGEMENT POLICY

Our company is committed to manufacturing high-quality seamless steel pipes and tubes and providing first-class services that meet or exceed the expectations of our customers and comply with the applicable international standards*. We achieve customer satisfaction through integrity and meeting our obligations, and in so doing, help our customers to reach their goals.

We ensure the future success and sustainability of our business operations by the efficient use of resources, target-focused continual improvement, protecting the environment and compliance with all applicable statutory requirements – **while always guaranteeing the highest safety standards for our employees**.

We successfully implement these goals by focussing on six key areas: Quality, safety, the environment, saving energy, asset management and information security.

Quality means the following for us:

- Faultless products and services
- Customer satisfaction through focusing on customers and meeting customer requirements
- Flexibility and delivery reliability

Safety and **occupational health management** mean the following for us:

- In technical terms: Safe workplaces, working materials, tools and equipment, and suitable personal protective equipment
- In organisational terms: Creating awareness, ongoing safety campaigns and training
- In terms of conduct: Safe practices and setting examples at all levels
- Health promotion

Environmental protection means the following for us:

- Responsible and economical use of resources
- Minimising emissions and avoiding harmful effects on the environment
- Continual improvement of environmental performance

Energy management means the following for us:

- Increasing energy efficiency – reducing energy costs
- Using renewable forms of energy
- Circular economy and sustainability

Asset management means the following for us:

- Minimising the cost of the plant and equipment over its entire life cycle
- High levels of plant availability
- Highly qualified staff for the installation and maintenance of plant and equipment

Information security means the following for us:

- High availability and reliability of the whole IT infrastructure
- Risk minimisation by always utilising the correct, state-of-the-art IT
- Appropriate qualification of IT experts for the use of hardware & software components
- Ensuring the confidentiality and integrity of data and information

As part of a double materiality analysis, the relevance of climate change is determined for all topics of the integrated management system on the one hand and the expectations and/or requirements of interested parties for the various aspects of the management systems in terms of climate change on the other.

We ensure the effectiveness of the management system through the excellent qualification levels, outstanding personal responsibility and high commitment levels of all employees and by the provision of all necessary resources.

The principles of the management systems apply both to the entire Kindberg site of voestalpine Tubulars GmbH & Co KG as well as to all relevant processes along the supply chain of our products and for services that are provided externally.

*ISO 9001, API Specification Q1, ISO 14001, ISO 27001, ISO 45001, ISO 50001, ISO 55001

2 DESCRIPTION OF THE COMPANY

voestalpine Tubulars GmbH & Co KG is an Austrian subsidiary of voestalpine AG – Division Metal Engineering. It is 50% owned by voestalpine AG and 50% owned by the American corporation National Oilwell Varco (NOV) Grant Prideco.

voestalpine AG has more than 50 production, R&D and distribution centres and licensees on 5 continents and employs close to 50,000 people.

NOV is one of the largest producers of drill pipe and drilling equipment worldwide, with sites in the USA, Mexico, Canada, Europe, and Asia.

The voestalpine Tubulars GmbH & Co KG facility is located in the Mur-Mürz valley near the town of Kindberg (District of Bruck-Mürzzuschlag) in the Federal State of Styria.

The factory grounds are located between the river Mürz, which bounds the site to the north, and the S6 Semmering motorway to the south of the plant.

Fig.: Aerial view of factory site

The individual plots of the factory site are identified in the land allocation plan as Industrial Estates I and II.

There are residential areas in the immediate vicinity of the plant. The site is protected by a flood defence wall. The prevailing wind direction is westerly.

The site has a connection to the S6 motorway, a rail connection to ÖBB Rail Cargo Group Austria, a natural gas connection, and a 110 kV electricity supply connection.

The process water supply is provided by two wells owned privately by the company, while the drinking water comes from the municipal supply.

The Kindberg plant has a long history in the iron and steel industry. The production facilities still in existence in Kindberg in the 1970s – the forging works, hot and cold rolling mills, and bright steel works – were restructured for the production of seamless steel tubing in the early 1980s following a strategic re-alignment. By virtue of its continual research and development work, the plant is always able to offer its customers tailor-made products. Regular investments ensure that production always makes use of the latest technological advances.

The Kindberg facility is made up of the main plants comprising a seamless tube rolling mill, OCTG finishing line, and a production line for industrial pipes, plus all the associated ancillary and auxiliary units such as workshops, Quality Control, Research & Development, a testing centre, and warehouse. From a technical design viewpoint, the production of seamless steel tubes is based on the push bench process.

The output of the production facilities at full capacity (24-hour operation) is approx. 430,000 tonnes of seamless steel tube a year with external diameters ranging from 26.7 to 193.7 mm. The Kindberg plant employs roughly 1,200 people.

voestalpine Tubulars manufactures seamless steel pipe for drilling and completion of conventional and unconventional (e.g. shale gas) oil and gas wells in API or special grades (e.g. 13Cr, VA Series), with API or Proprietary Connections (e.g. VAroughneck®, VAsuperior®, VAxplorer®, VAtitan®, VAwizard®, VAF) – also available with DryTec®, the dope-free thread coating.

As well as the products for the oil and gas industry, voestalpine Tubulars also manufactures line pipe, automotive and mechanical tubes and boiler and heat exchanger pipes. These products are used in applications such as crane building, the petrochemical industry, refineries, and the commercial vehicle and car industries.

New areas of application are also emerging in renewables, such as for the hydrogen industry (VAhyper® threaded connections), solutions for hydrogen storage, geothermal energy, carbon capture and storage, and bespoke solutions in renewable energies.

New for 2024 is the production of hollow sections, which are used in agricultural engineering, construction, mechanical engineering, and mobility. The dimensions of the hollow sections range from 40 x 40 mm to 170 x 170 mm for square cross-sections and from 50 x 30 mm to 200 x 100 mm for rectangular cross-sections.

3 PRODUCTION OF STEEL TUBES

Seamless tube rolling mill (hot-rolling mill)

From a technical design viewpoint, the production of seamless tubes is based on the push bench process. The raw material is exclusively round continuous-cast billets which are first cut to the desired lengths using carbide-tipped saws at room temperature. Billets which are cut to length on the billet shears in exceptional cases, on the other hand, have to be brought up to a cutting temperature of around 200 °C in a preheating furnace.

Fig.: Raw material store

After being heated to forming temperature (approx. 1,280°C) in a rotary hearth furnace, the billets are formed into hollow billets in a cross roll piercer.

Fig.: Rotary hearth furnace

After that, the hollow billet passes on to the push bench. There it is rolled into what is called a tube blank with a suitably thin wall and a maximum length of 22 m using a mandrel bar. The tube blank is then reheated to around 1,000 °C in a reheating furnace and rolled to the desired finished tube dimensions in a stretch-reducing mill.

Fig.: Push bench

The tubes pass via cooling beds and cold sawing mills to a temporary store from where they are fed either to the finishing line for industrial pipes or to the OCTG finishing line.

Subsequent processing

Finishing line for industrial pipes

The entire industrial pipes product group (mechanical engineering tubes, line pipes, etc.) passes through the finishing line and is transferred to a distribution warehouse after finishing.

OCTG finishing line

The production sequence in the oil field drill pipe works is essentially subdivided into five processing stages:

- Initial inspection
- Upsetting
- Heat treatment
- Thread cutting
- Coupling shop

In the initial inspection stage, the hot-rolled, untested pipes from the seamless tube rolling mill are straightened and non-destructively tested using electromagnetic methods. The tested pipes are then either passed directly to the threading department or to a further processing stage, depending on their intended application.

In the upsetting shop, the straight-ended semi-finished pipes are inductively heated at the ends and then widened to the required size in one of the two upsetting presses. Standard oil field drill pipe upsetting is done on a mechanical hydraulic press, while a hydraulic press is available for special upsetting requirements.

In the heat treatment phase, the pipes are first heated to hardening/normalising temperature in an austenitising furnace and then quenched using water sprinklers. The hardened pipes are then fed into a tempering furnace. After that, the normalised or hardened and tempered pipes pass through one of the two roller-type straightening machines (cold or hot straightening machine) and then through a subsequent sequence involving a pipe-end straightness check, blow-out station, non-destructive pipe testing using the stray flux method, and magnetic powder testing for the pipe ends. As a result, only 100%-tested, flawless pipes are passed on to the thread-cutting shop.

Fig.: Thread cutting machine

There are four thread-cutting lines available for the subsequent processing operations.

Before entering the automatic thread-cutting machines, the pipe ends can be calibrated for special applications using a calibration press. Once the thread has been cut (API or Proprietary thread) and checked, the couplings are screwed on and the pipes are pressure-tested on a water pressure testing press and drift-checked using a mandrel. At a down-line station, the protective caps for protecting the internal and external threads are screwed on.

The flawless finished pipes complete with protective caps are fed in line into what is known as an API detection and recording system where they are measured, weighed, marked, and finally rechecked.

In a subsequent sequence in the production flow, the pipes are corrosion-proofed in two UV coating shops using solvent-free UV coatings applied to their outer surface. They are dried using modern UV heater technology.

Finally, at an automatic bundling station, the fully finished pipes are gathered into bundles to customer requirements, wrapped and strapped, and forwarded to the shipping warehouse.

Fig.: Oilfield pipes ready for shipment

Coupling shop

The raw material for producing couplings are seamless tube. Individual coupling blanks are fed into parting-off machines where they are cut to the specified length. The pipe stubs thus obtained are fed into double-spindle thread-turning lathes. After thread-cutting, the finished couplings are checked at a testing station and then phosphate-coated.

The phosphate-coated couplings are screwed onto the pipes in the threading department.

Fig.: Coupling shop

Axle tube production

There is a fully automated production line (parting, deburring, blasting, cleaning, weighing, marking, corrosion-proofing, packing) available for the production of axle tubes for the automotive industry.

Fig.: Axle tubes ready for shipment in the axle tube production hall

Production of VTS®-edgeTubes

There is a hollow sections rolling mill included in the hot-rolling mill and a finishing line for the production of hollow sections.

Fig.: Hollow Sections finishing

4 MANAGEMENT SYSTEMS

The voestalpine Tubulars GmbH & Co KG facility in Kindberg has been registered as an EMAS site with an environmental management system certified in accordance with ISO 14001 since 1999.

The environmental management system is part of the integrated management system currently comprising six different certified management systems:

- ISO 9001 (quality management system)
- ISO 14001 (environmental management system)
- ISO 45001 (health and safety management system)
- ISO 50001 (energy management system)
- ISO 55001 (asset management system)
- ISO 27001 (information security management system)

In addition to three EMAS awards for the best environmental declaration, the company has so far received numerous other awards in the field of environmental practice (Ökoprofit, klima:aktiv).

The integration of the environmental management system into a fully integrated management system ensures all issues handled by the various systems receive equal treatment.

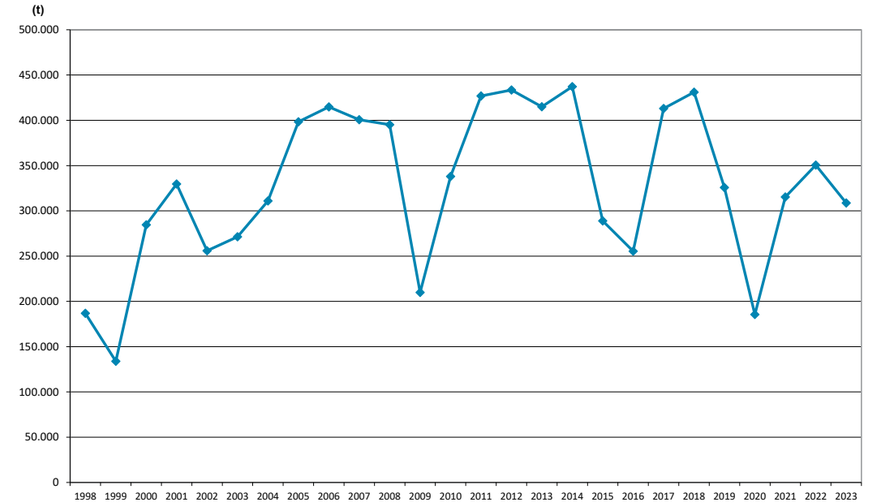
In addition, it enables synergistic effects to be utilised and unnecessary duplication to be avoided.

A unified system gives employees a greater understanding of the relevant company processes.

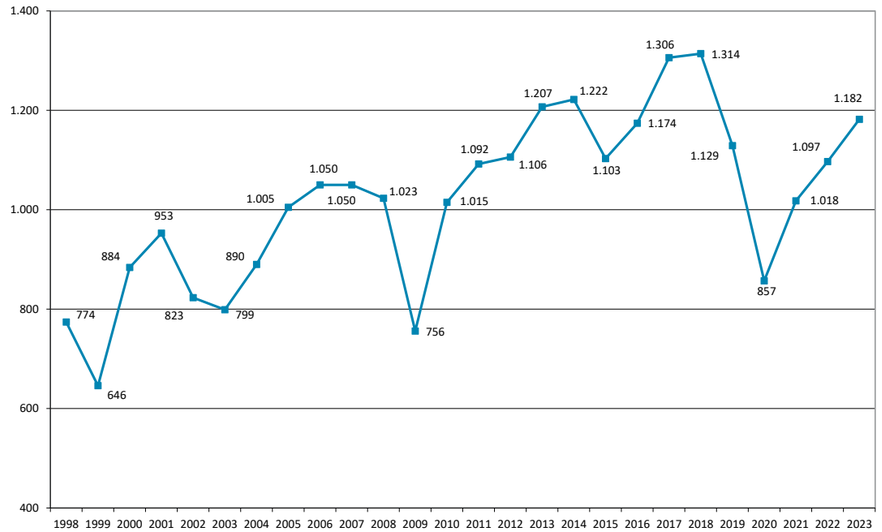
5 ENVIRONMENTAL ASSESSMENT OF INDIVIDUAL AREAS

5.1 General development of the business

Production volume:



Number of employees:



People employed as of 31st December each year

5.2 Environmental performance of the company

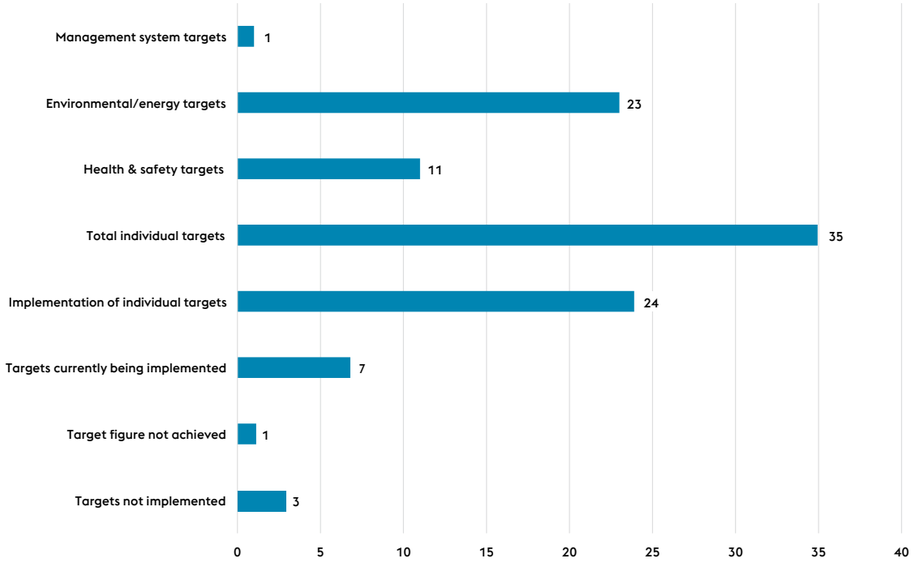
Environmental, energy, and health & safety programme:

A common environmental, energy, and health & safety programme was defined for the financial year 2024/25 (01/04/2024 to 31/03/2025), with 35 individual targets specified for the following areas:

- Management system (1)
- Sustainability (2)
- Input materials (2)
- Waste (1)
- Water / waste water (3)
- Exhaust air (2)
- Energy (11)
- Transport (2)
- Safety (6)
- Health (5)

Achievement of individual targets from the 2024/25 programme

Of the 35 environmental, energy, and health & safety targets set for FY 2024/25, 24 were achieved on time, which equates to an achievement rate of 68.6%.



7 targets, which were not implemented on schedule, have been carried over to the 2025/26 programme with new implementation deadlines:

- Research and development activities for the substitution of PFAS (perchlorinated and polychlorinated alkyl compounds) in DryTec® paint by determining alternative raw materials
- Boosting transparency in the neutralisation system area in the coupling shop by establishing new metrology
- Lowering energy consumption by >240 MWh/a in the production halls by integrating lighting sensors with installation of lighting control
- Reducing the energy consumption of air extraction systems in hollow sections finishing by >3 MWh per annum by modernising the air extraction systems
- Improving the energy efficiency of hardening furnace 1 and reducing energy consumption by 1.2% by installing an energy-efficient recuperator
- Lowering the number of accidents in the hot-rolling mill by raising employee awareness through safety training – by holding a minimum of two training sessions per employee each year in coordination with the shift managers
- Boosting safety at work in the C9 crane area in boiler tube finishing by purchasing and commissioning a new crane featuring the latest safety technology and automatic notching device

There was one target for which the target figure could not be achieved:

- Achieving a high level of health (health rate ≥95%) through the implementation of preventive health measures – target figure not achieved (health rate in FY 2024/25 – April 2024 to March 2025 – was 94.21%)

3 targets could not be achieved for economic or technical reasons:

- Improving the energy efficiency of tempering furnace 1 and reducing energy consumption by 1% by installing an energy-efficient recuperator – not implemented (project postponed)
- Using district heat for the first expansion stage in maintenance operations, thereby saving approx. 170,000 m³ of natural gas by integrating district heat – not implemented (project postponed due to high investment and ongoing costs)
- Increasing the maximum transport capacity per train to the North Sea ports from 20 to 27 wagons – not implemented (project suspended by rail company as the hook load limit is exceeded at 27 wagons)

Individual targets for FY 2024/25 by area:

Management system

1 individual target was specified and implemented on schedule for the management system area.

- Ensuring legal compliance by selecting and implementing new Legal Compliance software – implemented (to replace the existing legal database with new software for legal and regulatory tasks with regular updating of legal provisions)

Sustainability

Two individual targets were defined for sustainability and were implemented on time.

» Establishment of a sustainability organisation by defining responsibilities and tasks in relation to sustainability requirements – implemented (party responsible for overall coordination and for areas of competence CSRD, CBAM, EU-ETS, CSDDD, EU taxonomy, customers, Green Claims of voestalpine Tubulars determined – integration into the sustainability organisation of the Metal Engineering Division and the Group at large)
» Publishing the sustainability strategy and all measures already carried out in order to reduce the ecological footprint through implementation of a subsite on the website and app – implemented ("Sustainability" section added to the voestalpine Tubulars homepage – publication of the sustainability strategy and measures already carried out – publication of the "Mission Future" brochure)

Input materials

2 individual targets were defined for the input materials area, one of which was implemented on time. One target was not fully implemented and will be continued as part of the IMS programme in FY 2025/26.

» Research and development activities for the substitution of PFAS (perchlorinated and polychlorinated alkyl compounds) in DryTec® paint by determining alternative raw materials – not implemented (ongoing project) – to continue in FY 2025/26
» Standardised appearance for storage of different auxiliary and operating materials and tools at workstations in the threading department with design of auxiliary and operating materials boards – implemented (boards installed at several workstations)

Waste

One individual target was specified and implemented on schedule for the area of waste.

» Simplified handling and ergonomic work in waste disposal through engineering and purchase of a corresponding device – implemented (design and construction of a corresponding device)

Water / waste water

3 individual targets were specified for the waste water, two of which were implemented on time. One target was not fully implemented and will be continued as part of the IMS programme in FY 2025/26.

» Incident prevention in connection with oil leaks and associated spillages into the Mürz receiving water through installation of an oil separator in the hot-rolling mill's overflow water management area and an oil separator upstream of the discharge point into the receiving water – implemented (the two planned oil separators have been installed and commissioned)
» Adapting the ongoing pool cleaning process to prevent the leakage of contaminated industrial water through procedural investigation in relation to serial pool cleaning using all existing pools in the hot-rolling mill's water management – implemented (service instruction for pool cleaning in the hot-rolling mill's water management was adapted)
» **Boosting transparency in the neutralisation system area in the coupling shop** by establishing new metrology – being implemented (ongoing project) – to continue in FY 2025/26

Exhaust air

2 individual targets were specified and implemented on schedule for the exhaust air area.

» Reducing workplace pollution when applying paints to the pipe surface through installation of a paint mist extraction system in the boiler pipe finishing area – implemented (installation of an extraction system for the painting area)
» Preventing emissions in the threading department with acquisition of an electric forklift truck – implemented (electric forklift truck was purchased)

Energy

11 individual targets were specified for the energy area, whereby six targets were implemented on time. Three targets could not be implemented on schedule and will be continued as part of the IMS programme in FY 2025/26. Two targets were not implemented or were postponed indefinitely due to the current economic situation.

» Increasing the regional share of own electricity from PV systems, hydropower plants and wind farms by 10% by increasing the capacity of the energy generation systems – implemented (approx. 50% of the demand for electricity can be met by regional electricity generation – two PV systems with 7 GWh/a, two hydropower plants with 14.8 GWh/a and electricity from the Stanglalm and Hochpürschtling wind farms via Strompool Süd)
» Reducing energy consumption in the production halls by ≥240 MWh/a with integration of lighting sensors by installing lighting controls – being implemented (LED lighting and lighting sensors installed, excluding production hall extension TN21 and coupling shop) – to continue in FY 2025/26
» ≥10 MWh per year energy savings through recovery of braking energy from motors by installing inverters with energy recovery in new inverters in hollow sections finishing – implemented (transport and saw system parts were equipped with inverters and commissioned – energy saving of 163.2 MWh)
» Reducing the energy consumption of extraction systems in hollow sections finishing by >3 MWh/a by modernising the air extraction systems – being implemented (old air extraction systems have been replaced by new systems with inverters) – one system not yet commissioned – to continue in FY 2025/26
» Improving energy efficiency in hardening furnace 1 and reducing energy consumption by 1.2% with installation of a more energy-efficient recuperator – being implemented (the project has been postponed due to lengthy processing and lead times – installation during 2025 operational shutdown) – to continue in FY 2025/26
» Improving the energy efficiency of tempering furnace 1 and reducing energy consumption by 1% by installing an energy-efficient recuperator – not implemented (project postponed indefinitely)
» Using district heat for the first expansion stage in maintenance operations, thereby saving approx. 170,000 m^3 of natural gas by integrating district heat (approx. 1 MW) and supply for the first expansion stage (TA1, TF-PRZ, TF technical laboratory, TA, assembly hall) – not implemented (project postponed due to high investment and ongoing costs)
» Installing central cooling for the scaffolding workshop area, thereby saving 10 kg of refrigerant and reducing the number of systems by 5 by establishing a central cooling supply for this area – implemented (system implemented – a saving of 16 systems and 16.7 kg of refrigerant)

- Installing central cooling for the TN31 line 1 area, thereby saving 5 kg of refrigerant and reducing the number of systems by 5 by establishing a central cooling supply for this area – implemented (cooling system implemented on lines 1 and 2 – a saving of 9 systems and 20 kg of refrigerant)
- Reducing specific energy consumption in the reheating furnace when compared to BU 2023 with repair of the reheating furnace floor and structural adaptation of the reheating furnace floor and steel substructure to optimise insulation – implemented (repair of the reheating furnace floor and structural adaptation of the reheating furnace floor and steel substructure implemented – 3.16% reduction in energy consumption)
- Preventing undesirable exchange of air between the outside air and the inside of the production hall when the roller shutters are open during the colder months with installation of new cold air barrier systems on the two roller shutters MT15 and MT17 in the coupling shop – implemented (the two planned cold air barrier systems have been constructed)

Transport

2 individual targets were specified for the transport area, one of which was implemented on time. One target was not achieved due to the lack of technical pre-requisites.

- Doubling intermodal transports with a doubling of the tonnage of intermodal transports – implemented (>120% increase in transports from 1,812,746 kg in FY 2023/24 to over 4,000,000 kg in FY 2024/25)
- Increasing the maximum transport capacity per train to the North Sea ports from 20 to 27 wagons in cooperation with partners CB and RCA – not implemented (project suspended by rail company as at 27 wagons, as the hook load limit is exceeded)

Safety

6 targets were specified in the occupational health & safety area, four of which were implemented on schedule. Two targets were not fully implemented and will be continued as part of the IMS programme in FY 2025/26.

- Reducing occupational accidents by 10% – LTIFR figure max. 8.1 by continuing the “consciously safe” programme and ongoing measures to raise employee awareness as well as implementation of the “handle safely” and “near-accidents” campaigns – implemented (LTIFR figure in FY 2024/25 – April 2024 to March 2025 – is 7.98)
- Improved transfer of knowledge of applicable safety regulations for external companies at the Kindberg site with formulation of a document summarising existing regulations – implemented (brochure “General safety regulations for external companies”)
- Boosting safety at work in the C9 crane area in boiler tube finishing by purchasing and commissioning a new crane featuring the latest safety technology and automatic notching device – being implemented (ongoing project) – to continue in FY 2025/26
- Improvement in occupational safety in the event of operational shutdowns of more than one week through deactivation of the media supply and marking of the deactivation by means of feedback in SAP and confirmation via maintenance plan – implemented (protective covers produced – task with detailed description of measures for the First Level Team created as a recurring appointment in Teams tasks)
- Reduction in accident figures at the hot-rolling mill by raising employee awareness through safety training– at least two training sessions per employee each year in coordination with shift managers) – being implemented (ongoing project) – to continue in FY 2025/26
- **Avoidance of eye injuries in the coupling shop** through training courses, mini-workshops and regular sessions on the topic of “eye injuries” and “wearing safety goggles” – implemented (no accident with eye injury in the coupling shop in 2024 – all employees received instruction on the topic of avoiding eye injuries)

Health

5 targets were specified in the area of health promotion, four of which were implemented on schedule. The target figure was not achieved for one of the targets.

- Achieving a high level of health (health rate ≥95%) through the implementation of preventive health measures – target figure not achieved (health rate in FY 2024/25 – April 2024 to March 2025 – was 94.21%)
- Obtaining the BGF seal of approval of the Austrian Network for Workplace Health Promotion for the years 2025 - 2027 by fulfilling the 15 central quality criteria - implemented (the BGF seal of approval for 2025 – 2027 was restored).
- Increasing new registrations for the “echt gesund center” by >40 new registrations over 2023 by maintaining occupational health management presence, boosting health awareness through targeted measures, expanding the “echt gesund center” and new programmes – implemented (438 registrations for use of the “echt gesund center” in 2024)
- High level of participation in occupational health management programmes with >1,500 registrations due to high number of occupational health management programmes, measures, high presence of occupational health management activities and occupational health management communication – implemented (2,183 registrations for occupational health management activities in 2024)
- Reducing noise and vibrations caused by a high-pressure descaling pump in the metal workshop in the hot-rolling mill by establishing a concept for suitable installation locations and budget survey – implemented (engineering and concept creation completed)

6 ECOLOGICAL OPERATING REPORT

6.1 Materials and Energy Balance

Materials and Energy Balance 2024

Input:	
Circulating assets (usage in t)	**309,152.333**
Raw materials	306,144.700
Packaging for products	1,231.191
Protective caps	1,020.466
Operating supplies and consumables	755.977
Gas (input in m^3)	
Process gas/calibration gas	642,613.758
Water (input in m^3)	**2,503,851**
Drinking and sanitary water	17,089
Process water from wells	2,486,762
Compressed air (generated in m^3)	
Compressed air	41,370,806
Energy purchased	
Electricity (MWh_{el})	61,603.318
Natural gas (m^3)	27,860,993.535
Petrol (litres)	111,000
Diesel (litres)	131,069.000
Heating oil (litres)	55.000

Output:	
Products and packaging (t)	**276,228.870**
Products	273,977.213
Packaging for products	1,231.191
Protective caps	1,020.466
Waste, reusable materials and used materials (t)	**62,312.672**
Used materials	139.430
Reusable materials	44,635.646
Non-hazardous waste	580.723
Non-hazardous waste (special projects/building projects)	15,069.660
Hazardous waste	1,887.213
Waste water (output in m^3)	**2,481,543**
Sanitary waste water (indirectly discharged)	15,122
Process waste water (indirectly discharged)	118
Process waste water (directly discharged)	2,466,303
Exhaust air (emission in t)	**57,225.653**
Total gaseous emissions Of which CO_2: 57,197.592 Remainder (CO, NO_x, SO_2, C_{tot}, C_xH_y): 17.005	57,214.597
Dust	4.142
Solvent emissions	6.914
Energy consumed (MWh)	**383,920.453**
Energy converted (electricity)	61,603.318
Heating energy (natural gas)	321,016.451
Propulsion energy (petrol)	0.945
Propulsion energy (diesel)	1,299.156
Heating energy (heating oil)	0.582
Waste heat for district heating (MWh)	**4,489.101**

6.2 Input materials

Raw material quantity used: 306,144.700 t (steel billets)

Fig.: Storeroom for operating materials & consumables

Fig.: Gas store

Operating supplies and consumables used

Description of input material		Quantity in kg
Oils		273,324.07
» Hydraulic fluid	219,956.07	
» Transmission fluid	52,094.00	
» Compressor oil/insulating oil	913.00	
» Engine oil	361.00	
Lubricants		166,393.45
» Grease	56,465.41	
» Thread grease	56,388.04	
» Mandrel lubricant	53,540.00	
Paints and coatings		144,517.87
» Marking ink, enamel paint, etc.	9,993.87	
» UV coating	134,000.00	
» Marking ink	524.00	
Solvents		14,469.45
Solvents without VOC content		13.50
Refrigerants and coolants		150.90
Oil binding agents		8,640.00
Corrosion inhibitors/rust solvents		20,244.36
Metal machining fluid		14,680.00
Cutting fluid		889.05
Cleaning agents		31,013.07
Sealing agents/adhesives		154.25
Antifreeze		1,440.00
Phosphating agents		60,792.00

Water conditioning agents	50.00
Fluxing agents	2,900.00
Chemicals	16,261.42
Ad Blue	43.60
Total operating supplies and consumables:	**755,976.99**
Gases	
» Acetylene	2,480.000
» Argon	151.800
» Carbon dioxide	243.510
» Propane	264.000
» Oxygen in tank	634,622.310
» Oxygen in cylinders	1,597.100
» Nitrogen in tank	10.680
» Nitrogen in cylinders	192.000
» Gas mixture (argon/CO_2)	2,660.400
» Hydrogen sulphide	350.900
» Hydrogen sulphide – nitrogen	40.000
» Hydrogen sulphide – CO_2	1.058
Total gases:	**642,613.758**

6.3 Waste

Non-hazardous waste, reusable materials and used materials			
Code number	**Designation**	**Quantity in 2024 (in kg)**	**Disposal interval**
17202	Used wood, untreated	233,900	As required
18718	Waste paper and cardboard	16,020	As required
18718	Shredded documents	4,220	As required
31103	Spent furnace refractory	162,040	As required
31409	Building rubble	16,160	As required
31444	Abrasives	8,860	As required
35103	Scrap iron	620	As required
57129	Plastics (safety caps)	3,640	As required
57129	Thermomix	14,400	Fortnightly
57129	Toner cartridges	203	As required
91101	Commercial waste	120,660	Every 4 weeks
	Total of non-hazardous waste:	**580,723**	
35105	Metal packaging	5,820	Every 8 weeks
91201	Cardboard packaging and paper	54,100	Fortnightly
91207	Mixed plastic packaging	60,070	Fortnightly
92105	Tree and shrub cuttings	14,420	As required
92401	Organic waste	4,900	Fortnightly
92402	Kitchen and food waste	120	As required
	Total of used materials:	**139,430**	
35102	Scale	10,687,055	As required
35103	Scrap	30,075,776	As required
35103	Swarf	3,872,815	As required
	Total of reusable materials:	**44,635,646**	

Fig.: Scale

Fig.: Scrap

Fig.: Swarf

Recycling pathways of reusable materials:

Scale: Cement industry (Lafarge Perlmoser, Alpacem, Holcim)

Chemical industry (Donau Chemie)

Scrap: voestalpine Donawitz / Schrott Waltner

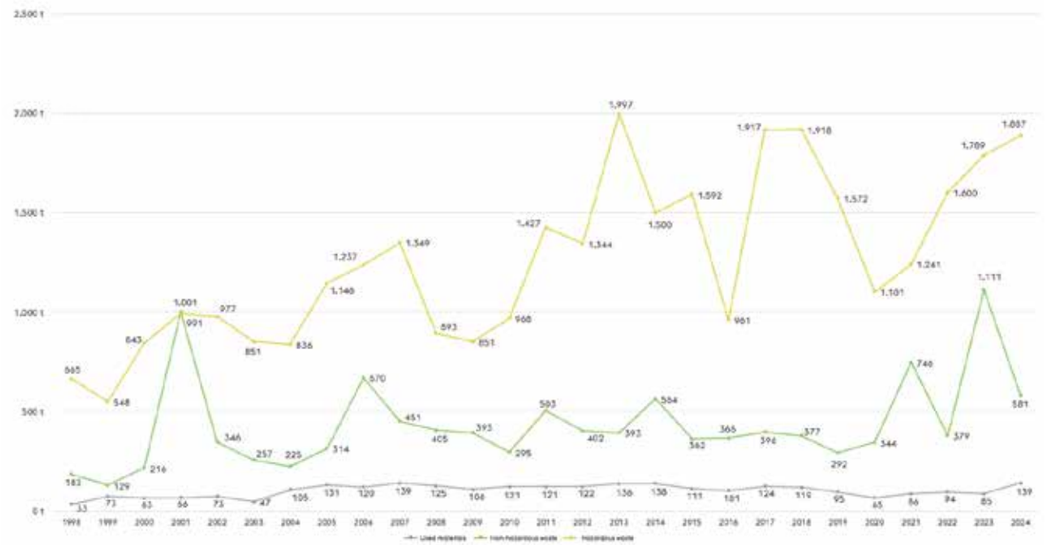
Swarf: Schrott Waltner

Hazardous waste		
Code no: ÖNORM S2100	Designation	Quantity in 2024 (in kg)
17209	Tar oil-impregnated wood	116
31108	Furnace slag (metallurgical processes)	20,980
31437	Mineral fibre	4,350
31637	Phosphating sludge	32,980
35102	Unpurified scale	9,500
35103	Contaminated scrap iron	860
35201	Electrical waste	15,430

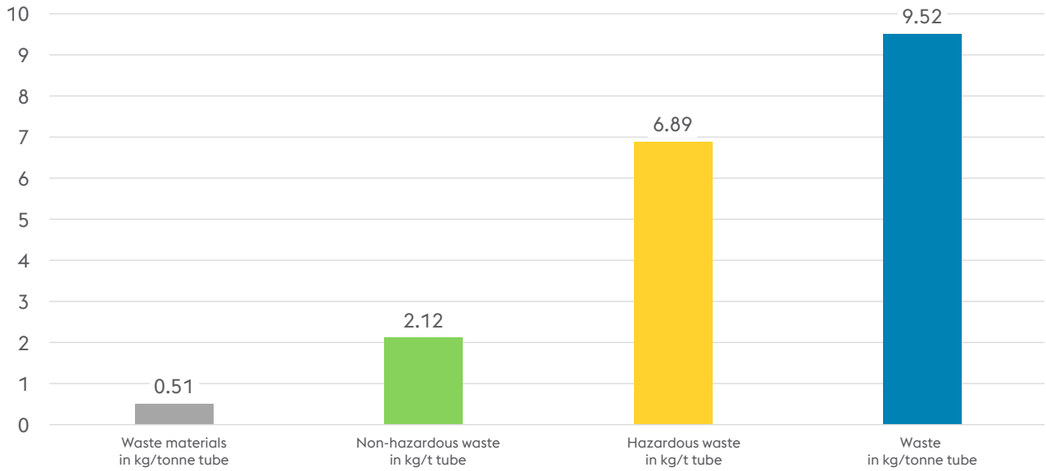
35205	Cooler units	668
35206	Refrigerators and air conditioners	2,351
35209	Capacitors	1,310
35212	Screens	385
35220	Electrical appliances >50 cm	200
35230	Electrical appliances <50 cm	783
35322	Lead accumulators	920
35338	Batteries, unsorted	320
35337	Lithium-ion batteries >0.5kg	24
35339	Neon tubes	444
54102	Used oil	46,320
54201	Oil sludge	67,640
54202	Grease	44,004
54402	Emulsions	325,330
54408	Oil/water mixture	971,320
54702	Oil separator content, neutral	95,860
54715	Sludge from tank cleaning	129,780
54926	Oil binding material, used	3,493
54930	Materials contaminated with oil	52,490
54930	Hydraulic hoses contaminated with oil	100
55370	Solvent mixture	10,280
55502	Used paints	13,079
57127	Plastic containers with hazardous contents	6,140
58201	Filter cloths/bags	20,184
58202	Filter cloths/filter bags, cooling tower filters	770
59803	Spray cans	1,226
35202	Data carrier destruction	16
35231	Mixed electrical/electronic scrap	5,680
39905	Fire extinguisher powder residues	1,880
	Total of hazardous waste:	**1,887,213**

The disposal intervals for hazardous waste are to be determined individually depending on the quantity generated.

Waste volume development, 1998 to 2024:



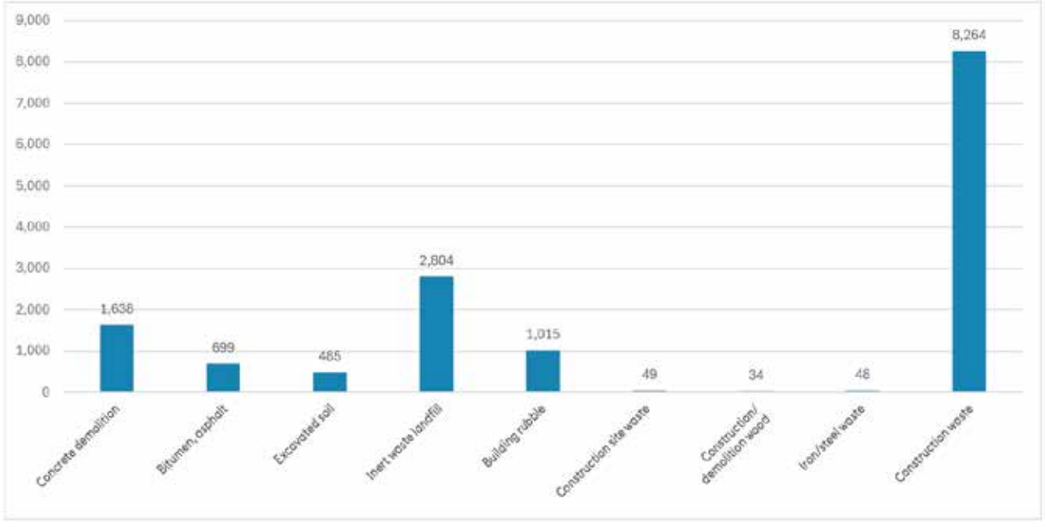
Waste accrual relative to production volume (temporary store generation):



Waste in 2024 from special projects:

In 2024, special projects (demolition, construction, investments) generated a range of different waste streams with a total volume of 15,069.660 tonnes. The individual waste fractions are shown in the table below.

Code no: ÖNORM S2100	Designation	Quantity in 2024 (in kg)	Disposer
31427	Concrete demolition	1,638,310	UWS Marein
54912	Bitumen, asphalt	698,870	Mixing plant St. Marein
31411-30	Excavated soil	484,500	Mixing plant St. Marein
31411-33	Inert waste landfill	2,804,240	UWS Marein
31409	Building rubble	1,015,360	UWS Marein
91206	Construction site waste	48,760	Saubermacher
17202	Construction/ demolition wood	33,530	Saubermacher
35103	Iron/steel waste	48,310	Scrap, Waltner Schaufler
31424-37	Construction waste	8,264,200	UWS Marein Saubermacher
18705	Bitumen board	4,320	Saubermacher
31409	Wood-chip concrete	9,700	Saubermacher
31412	Asbestos cement	19,560	Saubermacher
	Total:	**15,069,660**	



6.4 Water / waste water

Sanitary water:

Consumption of drinking and sanitary water: 17,089 m^3
Sanitary waste water: 15,122 m^3

Process waste water:

Constituent flows of process waste water:

- Sedimentation for seamless tube rolling mill waste water
- Gravel filter for waste water from CT plant
- Neutralisation for waste water from phosphating plant
- Flotation for waste water from upsetting plant
- Sand filter for waste water from heat treatment line 2
- Acid gas lab exhaust gas washer (indirect discharge): 118 m^3

Measuring point: CT discharge shaft for partial flow CT 1 (external inspection on 03/07/2024 and 04/07/2024)

Parameter	Limit as per ruling	Measurement result from external inspection	Measurement result from internal inspection	Internal monitoring interval
Temperature	30°C	20.0°C	-	Continuous
pH value	6.5 – 8.5	8.35	-	Continuous
Materials removable by filtration	14.40 mg/l	1.00 mg/l	2.42 mg/l	Weekly
Iron	0.60 mg/l	0.066 mg/l	-	Not prescribed
COD	14.40 mg/l	<5 mg/l	-	Not prescribed
HC index	0.60 mg/l	0.36 mg/l	0.31 mg/l	Fortnightly
TOC	4.80 mg/l	1.7 mg/l	-	Not prescribed
Waste water quantity	250 m^3/h	143 m^3/h	160.00 m^3/h	Continuous

Fig.: Scale trap in CT plant water management system (partial flow 1)

Measuring point: Flotation partial current CT 2 (external inspection on 16/07/2024 and 17/07/2024)

Parameter	Limit as per ruling	Measurement result from external inspection	Measurement result from internal inspection	Internal monitoring interval
Temperature	30°C	19.0°C	-	Continuous
pH value	6.5 – 8.5	7.7	-	Continuous
Materials removable by filtration	50 mg/l	5.40 mg/l	3.01 mg/l	Fortnightly
Iron	2.0 mg/l	0.064 mg/l	<0.10 mg/l	Fortnightly
Aluminium	2.0 mg/l	1.34 mg/l	0.31 mg/l	Fortnightly
Ammonium	10.0 mg/l	0.23 mg/l	0.04 mg/l	Fortnightly
Boron	Measured value	5.97 mg/l	-	Not prescribed
HC index	10 mg/l	<0.060 mg/l	0.26 mg/l	Fortnightly
COD	150 mg/l	<5 mg/l	<15 mg/l	Fortnightly
Waste water quantity	8 m^3/h	0.38 m^3/h	0.41 m^3/h	Continuous

Measuring point: Neutralisation plant (external inspection on 03/07/2024 and 04/07/2024)

Parameter	Limit as per ruling	Measurement result from external inspection	Measurement result from internal inspection	Internal monitoring interval
Temperature	30°C	19.7°C	-	Continuous
pH value	6.5 – 9.0	7.45	-	Continuous
Materials removable by filtration	50 mg/l	2.45 mg/l	-	Not prescribed
Iron	2.0 mg/l	0.17 mg/l	0.33 mg/l	Fortnightly
Manganese	1.0 mg/l	0.064 mg/l	0.18 mg/l	Fortnightly
Nickel	0.5 mg/l	0.030 mg/l	0.11 mg/l	Fortnightly
Fluoride	20 mg/l	<0.5 mg/l	-	Not prescribed
Nitrate *)	40 mg/l	61 mg/l *)	-	Not prescribed
Nitrite *)	1.0 mg/l	1.3 mg/l *)	0.49 mg/l	Fortnightly
Total phosphorous	2.0 mg/l	0.18 mg/l	0.96 mg/l	Fortnightly
Total surfactants	3.0 mg/l	1.27 mg/l	-	Not prescribed
HC index	5.0 mg/l	0.39 mg/l	-	Not prescribed
COD	200 mg/l	20.6 mg/l	27.22 mg/l	Weekly
Waste water quantity	2 m^3/h	0.40 m^3/h	0.10 m^3/h	Daily

*) see opinion on page 63

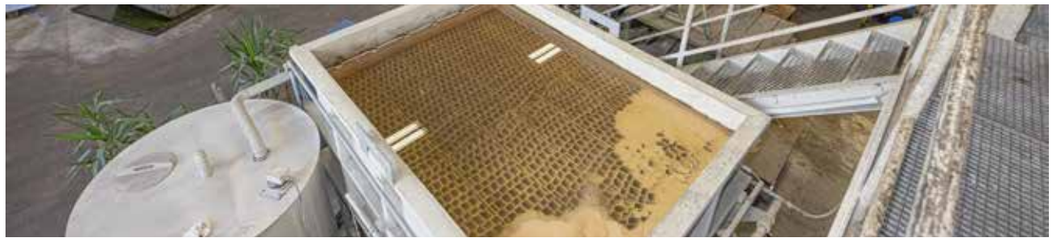


Fig.: Neutralisation plant

Measuring point: Acid gas lab exhaust gas washer (external inspection on 25/04/2024)

Parameter	Limit as per contract	Measurement result
pH value	6.5 – 9.5	9.3
Materials removable by filtration	150 mg/l	5.0 mg/l
Sulphide	0.5 mg/l	0.042 mg/l
Temperature	35°C	16.9°C
Waste water quantity	1.2 m^3/d	0.3 m^3/d
Arsenic	0.1 mg/l	0.088 mg/l
Cadmium	0.05 mg/l	<0.0005 mg/l
Cobalt	0.5 mg/l	<0.001 mg/l
Copper	0.5 mg/l	0.063 mg/l
Nickel	0.5 mg/l	0.0097 mg/l
Mercury	0.01 mg/l	<0.0001 mg/l
Zinc	2.0 mg/l	0.015 mg/l

No internal inspections prescribed!

The waste water does not pass into the receiving waterway but rather into the public sewer system in accordance with the waste disposal contract with WV Mürzverband.

Fig.: Chemical laboratory (waste water analysis)

Measuring point: Compressor condensate (external inspection on 04/07/2024)

Parameter	Limit as per contract	Measurement result
pH value	6.5 – 8.5	8.2
COD	90 mg/l	89 mg/l
HC index	5.0 mg/l	4.5 mg/l

The compressor condensate does not pass directly into the receiving waterway but instead is fed into the open water system of the seamless tube rolling mill (see table for seamless tube rolling mill).

Measuring point: Seamless tube rolling mill (external inspection on 03/07/2024 and 04/07/2024)

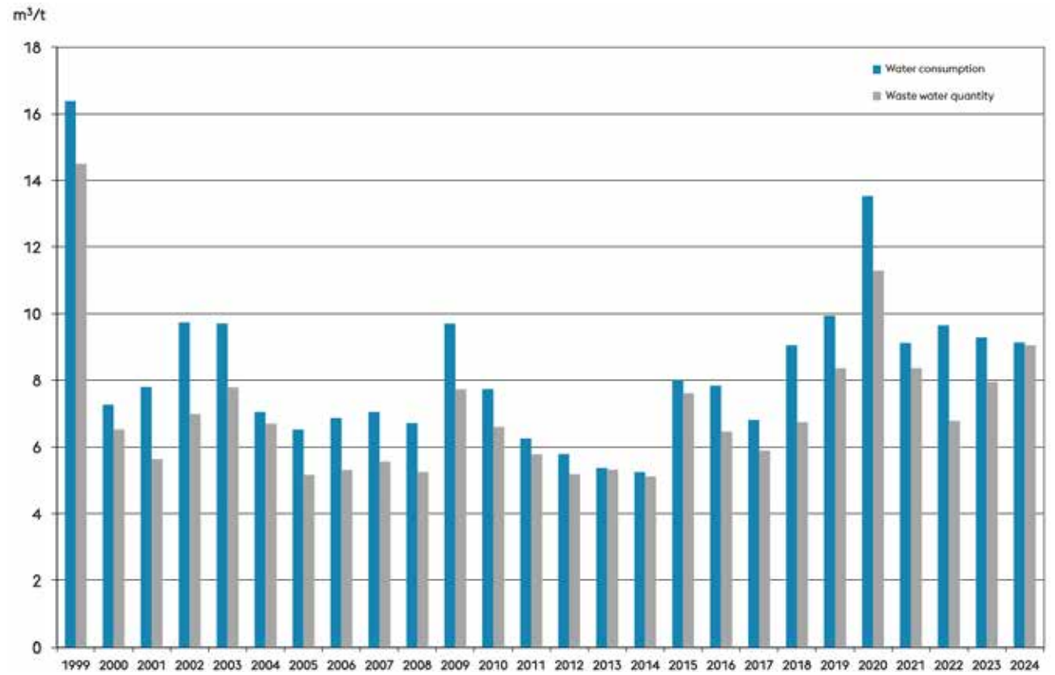
Parameter	Limit as per ruling	Measurement result from external inspection	Measurement result from internal inspection	Internal monitoring interval
Temperature	30°C	23.50°C	-	Continuous
pH value	6.5 – 8.5	8.3	-	Continuous
Materials removable by filtration	50 mg/l	6.0 mg/l	3.69 mg/l	Daily
Iron (filtered)	0.5 mg/l	0.38 mg/l	0.10 mg/l	Daily
COD	50 mg/l	<5 mg/l	16.70 mg/l	Daily
HC index	5.0 mg/l	0.25 mg/l	0.35 mg/l	Weekly
Phosphorous (filtered)	2.0 mg/l	0.74 mg/l	-	Not prescribed
Phosphorous (total)	3.0 mg/l	0.76 mg/l	0.23 mg/l	Daily
Waste water quantity	180 m^3/h	135 m^3/h	102.94 m^3/h	Continuous

Fig.: Waste water purification system for seamless tube rolling mill

Measuring point: Heat treatment line 2 (external inspection on 03/07/2024 and 04/07/2024)

Parameter	Limit as per ruling	Measurement result from external inspection	Measurement result from internal inspection	Internal monitoring interval
Temperature	30°C	22.1°C	-	Continuous
pH value	6.5 – 8.5	8.45	-	Continuous
Materials removable by filtration	50 mg/l	0.40 mg/l	2.16 mg/l	Fortnightly
Chrome	0.5 mg/l	<0.0010 mg/l	-	Not prescribed
Iron	2.0 mg/l	0.072 mg/l	-	Not prescribed
COD	75 mg/l	20.7 mg/l	<15 mg/l	Fortnightly
HC index	10.0 mg/l	0.060 mg/l	<0.08 mg/l	Fortnightly
Waste water quantity	160 m^3/h	19.5 m^3/h	18.09 m^3/h	Continuous

Specific water/waste water quantity relative to production volume 2024 in m^3/t:



Total contaminant load 2024:

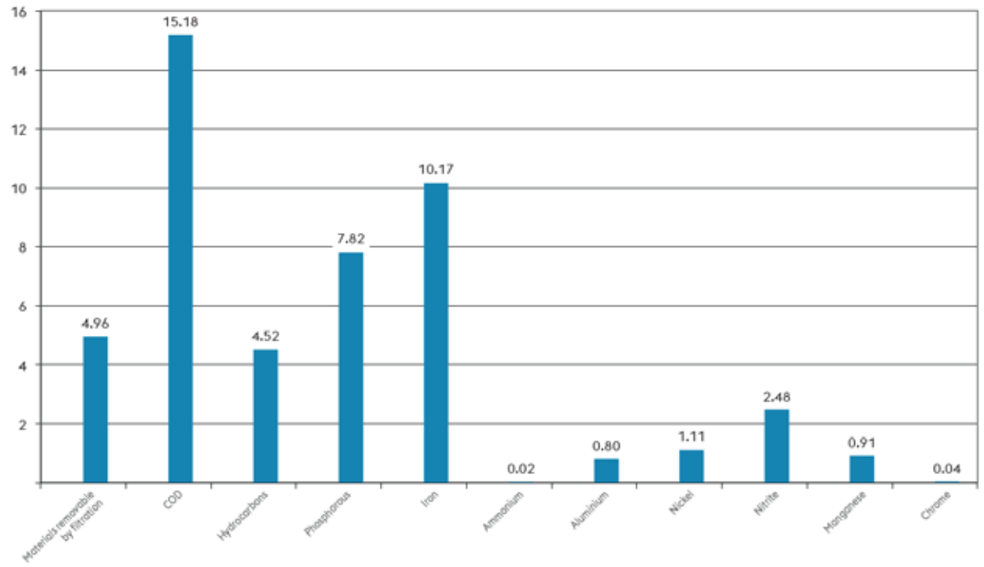
Parameter	Max. permissible contaminant load in kg	Contaminant load in kg per annum
Materials removable by filtration	142,704	7,074.63
COD	161,531	24,522.43
Hydrocarbons	16,890	763.92
Phosphorous	2,663	208.25
Iron	3,317	337.39
Ammonium	701	0.14
Aluminium	140	1.12
Nickel	9	0.10
Nitrite	18	0.43
Manganese	18	0.16
Chrome	411	0.16

The total contaminant load figures are calculated from the average waste water concentration levels identified by internal inspections and the annual waste water volumes for the constituent flows.

Waste water quantity 2024 – sorted by partial flow:

Waste water flow	Waste water volume 2024 in m^3	Hourly average in m^3/h
Seamless pipe rolling mill	901,739	102.94
CT partial flow 1	1,401,590	160.00
CT partial flow 2 flotation	3,624	0.41
Neutralisation plant	886	0.10
Heat treatment 2	158,464	18.09
Total quantity:	**2,466,303**	

Utilisation of maximum permissible waste water contaminant loads for 2024 in %:



Groundwater inspection:

Groundwater analyses must be carried out every two years in the area of the decommissioned building waste landfill site.

Building waste landfill site measuring point: Before and after filling (05/07/2023)

Parameter	Unit	Measured value before filling	Measured value after filling
Depth	m	9.23	10.22
Temperature, water	°C	11.9	12.3
pH value	-	7.4	7.2
Electrical conductivity	µS/cm	496	528
Acid capacity up to pH 4.3	mmol/l	3.6	4.1
Carbonate hardness	°dH	10.1	11.5
Overall hardness	°dH	11.4	13.4
Ammonium (NH_4^+)	mg/l	<0.010	<0.010
Nitrate (NO_3^-)	mg/l	5.6	6.5
Nitrite (NO_2^-)	mg/l	<0.01	<0.01
Chloride (Cl^-)	mg/l	37	31
Sulphate (SO_4^{--})	mg/l	25	30
Total iron	mg/l	0.015	0.18
Total manganese	mg/l	<0.001	0.0048
TOC	mg/l	1.3	0.68
HC index	mg/l	<0.06	<0.06

6.5 Exhaust air

Exhaust air calculation:

The basis for calculating the emissions in the exhaust air is the consumption of natural gas (27,860,994 m^3) and the consumption of diesel (131,069 l) in 2024.

Individual figures relating to exhaust air

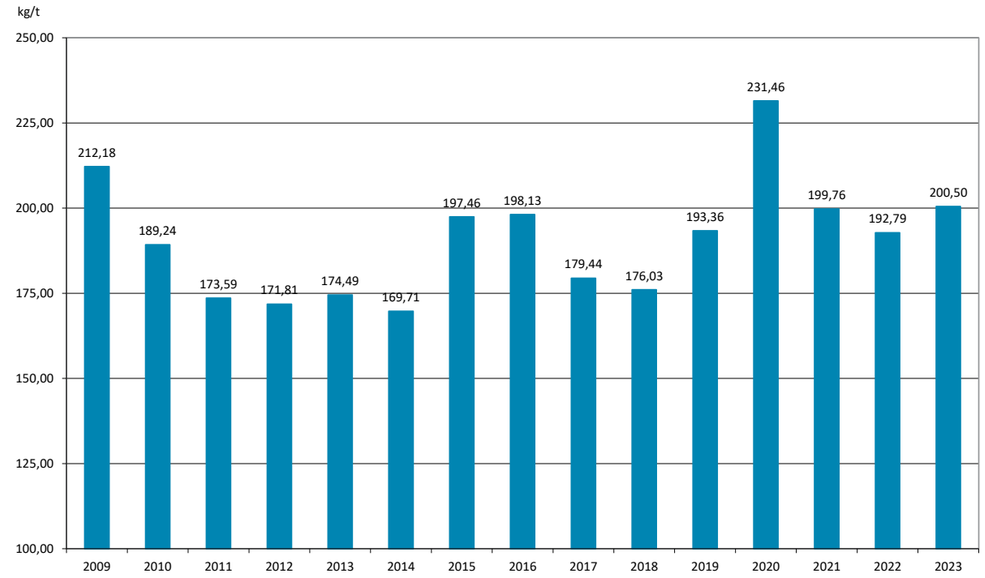
Calculated emissions in exhaust air from natural gas and diesel consumption		
	Gaseous emissions in t pa	**In kg/t of product**
CO_2	57,197.592	208.7677
CO	1.393	0.0051
NO_x	11.413	0.0417
SO_2	0.567	0.0021
C_{tot}	3.622	0.0132
C_xH_y	0.011	0.00004
Gaseous exhaust air emissions: 57,214.597 t pa		

Dust		
	Dust emissions in t pa	**In kg/t of product**
Dust from filter systems	3.864	0.0141
Dust from natural gas	0.279	0.0010
Total dust quantity: 4.142 t pa		

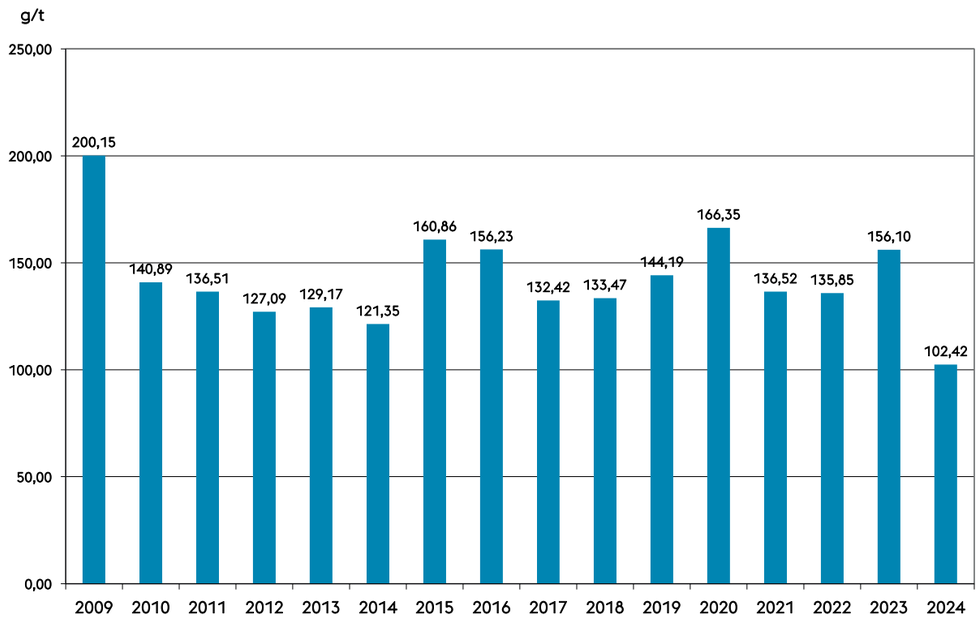
Solvents		
	Solvent emissions in t pa	**In kg/t of product**
Solvent emissions from substances with solvent content	6.360	0.0232
Solvent emissions from diesel	0.554	0.0020
Total solvent emissions: 6.914 t pa		

Fig.: Exhaust chimney for heat treatment plant 1

CO_2 emissions (in kg per t of steel tube produced):



Exhaust air emissions (in g per t of steel tube produced):



Exhaust air: CO, NO_x, SO_2, C_{tot}, C_xH_y, dust, solvents

Solvent emissions from the use of consumables with solvent content:

Solvent quantity used in kg	22,525.29
Solvent emissions in kg	6,359.74
Solvent waste in kg	16,165.55

In addition to the 6,359.74 kg from the consumables used, there are also 553.77 kg of emissions with solvent content from the use of diesel fuel, so that the total solvent emissions in the exhaust air amount to 6,913.51 kg.

The **solvent content** of the materials used is made up of various volatile organic compounds (VOCs), which are listed in the table below:

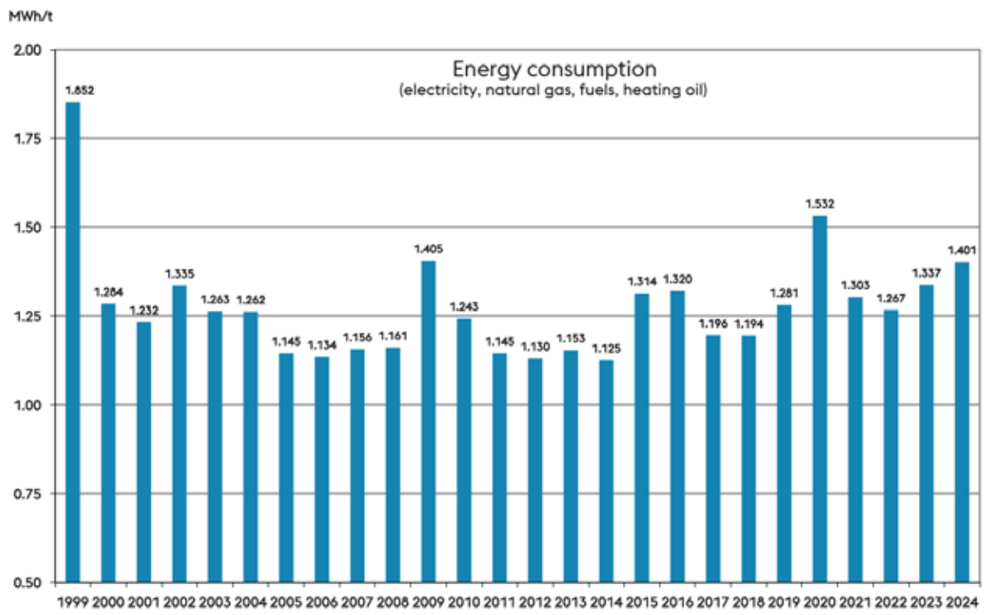
Designation	Quantity in kg/year
1-methoxy-2-propanol	222.17
2-amino-ethanol	3.17
2-butanone	772.43
2-methoxy-1-methylethyl acetate	43.82
Acetone	11,480.54
Butanol	1,430.95
Butyl glycol	16.41
Dimethoxymethane	18.83
Dimethyl ether	33.81
Ethanol	799.51
Ethanolamine	468.00
Ethyl acetate	0.08
Ethylbenzene	444.89
Isobutane/butane	72.19
Isobutyl acetate	1,637.34
HC mixtures	248.81
Methyl methacrylate	29.89
n-butyl acetate	793.05
Naphtha	868.02
Propane	214.23
Propanol	18.37
Siloxane	0.02
White spirit	2.57
Toluol	2,742.42
Xylol	163.79
Total:	**22,525.29**

6.6 Energy

Energy purchased		**Energy consumed (MWh)**	**383,920.453**
Electricity (MWh_{el})	61,603.318	Energy converted (electricity)	61,603.318
	of which renewable energies: 61,603.318 (MWh) = 100%		
Natural gas (m^3)	27,860,993.535	Heating energy (natural gas)	321,016.451
Petrol (litres)	111.000	Heating energy (heating oil)	0.945
Diesel (litres)	131,069.000	Propulsion energy (fuel)	1,299.156
Heating oil (litres)	55.000	Heating energy (heating oil)	0.582

Fig.: Transformer substation

Total energy consumption (in MWh per t of steel tube produced):



6.7 Transport

With the exception of a few special deliveries, the raw material (continuous-cast billets) is transported by rail.

The finished products are mostly (76%) shipped out by rail; a smaller proportion (24%) is transported by road on trucks. The volume of finished products shipped out in 2024 amounts to 285,252.891 t.

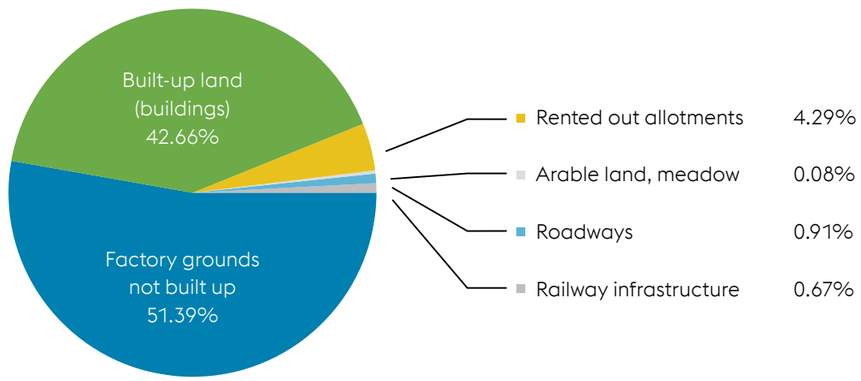
Transport on site between the individual parts of the factory takes place by trucks.

Fig.: Transport of finished products by rail

6.8 Use of land

Category	**Area in m^2**	**Proportion in %**
Total area	399,690	100
Built-up land	170,495	42.66
Factory grounds not built up	205,410	51.39
Roadways	3,639	0.91
Railway infrastructure	2,682	0.67
Allotments rented out*)	17,155	4.29
Arable land, meadow*)	309	0.08

*) Due to the small size of the individual plots rented out, an assessment regarding "natural land management" is dispensed with.



6.9 Indirect environmental aspects

Seamless tube as a product produces no negative environmental impacts whatsoever during use, recycling, or disposal. Its effect on the environment is neutral during use. The product creates no pollutant emissions of any kind when used for its intended purpose. At the end of their useful life, the pipes/tubes can be reused in the form of scrap as a secondary material in the iron and steel industry and are thus 100% recyclable. If the pipes/tubes are disposed of in landfill sites, no environmental effects of any kind are to be expected.

In the development and design process, the specifications are largely determined by the customer and/or the purpose for which the product is to be used and thus are not within the control of the company to any meaningful degree.

In connection with transport, it is worth mentioning that the customer base of voestalpine Tubulars is a global market in which the finished tubes/pipes are shipped worldwide by rail and sea.

Environmentally significant products and services are procured in accordance with the criteria of the quality management system taking account of the environment-related criteria, while ensuring that operating materials and consumables, packaging materials, and technical supplies with the least possible environmental impact are purchased. The selection of suppliers, assessment of them and approval of new suppliers are also carried out taking account of environment-orientated aspects.

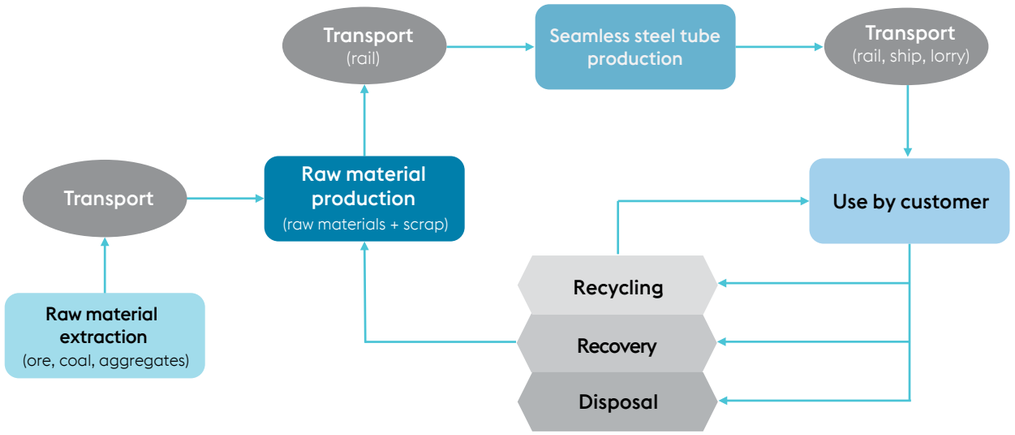
The environmental management requirements do not apply only to the employees of voestalpine Tubulars. The contractors and subcontractors operating at the Kindberg site are also required to comply with the environmental standards specified by voestalpine Tubulars.

The environmental impact caused by employees commuting to and from the workplace is difficult for the company to have any control over. However, there is the possibility of a public bus service which would provide the option of travelling by public transport. Due to the rural nature of the surrounding area and the associated inadequacy of the public transport system serving the site, the vast majority of employees rely on the use of private cars for travel to and from work. Sufficient parking spaces are available for employees in the immediate vicinity of the premises and in addition, there is also the option of purchasing a cost-effective bicycle through the company from firmenradl.at, which can also be used for personal trips.

Of the total workforce, 31% live in Kindberg, another 53% live within a radius of <20 km and 16% of staff travel more than 20 km to work.

7 LIFE CYCLE ASSESSMENT

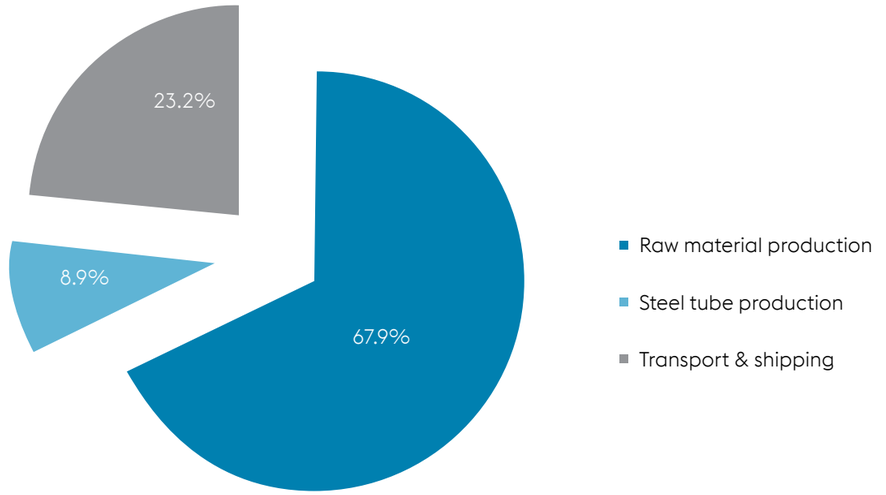
Life cycle stages of seamless steel pipes and tubes:



Calculation of carbon footprint:

The definition of the analysis parameters takes account of the areas of raw material transport, raw material production, raw material transport, steel pipe/tube production, on-site transport, and the transport of finished products to customers.

Percentage share of carbon equivalents:



8 SUSTAINABILITY

Alongside the life cycle analysis, numerous measures and projects in the area of sustainability were defined and implemented in 2024.

8.1 Divisional sustainability management

The topic of sustainability has been an integral component of the environmental and energy management system for some time. Due to the current circumstances (climate protection, conservation of resources, energy supply, etc.), great attention has been paid to the topic of sustainability within the company and the sustainability management department was established within the division. It is organised centrally in Metal Engineering with organisational units set up in all business units for dealing with the issue of sustainability in more depth. At voestalpine Tubulars, sustainability has been integrated into the existing environmental management system.

In the course of regular exchanges of information, the division-wide and Group-wide sustainability requirements are defined and measures for the implementation of the specified requirements are defined and implemented. The Group has defined climate targets and publishes an annual CR report covering and taking account of the overall figures for the voestalpine corporation.

Among the core topics of sustainability management are:

- Sustainability strategy
  - Organisational structure for sustainability
  - Market development (green steel)
  - Certifications and gradings (ESG, EPD, CDP, SBTi, ISO, EcoVadis)
  - Circular economy
  - Energy efficiency potential – reduction in greenhouse gas emissions
- "Road to Zero" decarbonisation programme
  - Production processes (natural gas)
  - Heating (natural gas)
  - Vehicle fleet (fuels)
- Sustainability communication guidelines
  - Basic knowledge of sustainability
  - Transformation steps
  - Energy supply
  - Green products
- Projects
  - Examples: Waste heat utilisation, PV system, hydropower plants, hydrogen
- Sustainable procurement
  - Group-wide project
  - Consideration of social and ecological risks and effects of suppliers within supply chain management
  - Establishment of a sustainable supply chain as an essential component of the sustainability strategy

8.2 Greenhouse gas balance according to ISO 14064-1 and ISO 14067

Greenhouse gas balances were prepared for 2024 in accordance with ISO 14064-1 and ISO 14067 and the calculated company carbon footprint CCF and product carbon footprint were verified by TÜV Süd.

When calculating the GG balances, a distinction was made between direct and indirect GG emissions.

Direct greenhouse gas emissions (ISO 14064-1):

- Natural gas for heating and processes/heating oil/refrigerants
- Internal transport/mobility (management)/plant car
- Production-related greenhouse gas emissions

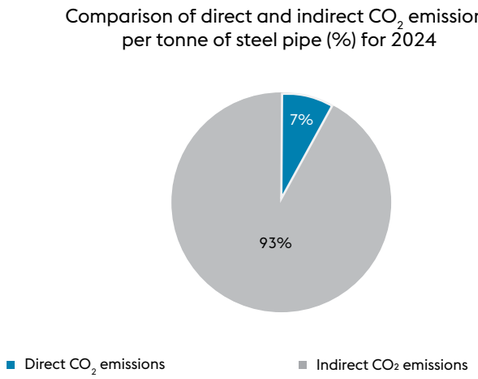
99.3% of direct greenhouse gas emissions can be attributed to the use of natural gas for processes (93.82%) and heating (5.47%); on-site transport causes slightly 0.6% of direct greenhouse gas emissions.

Indirect greenhouse gas emissions (ISO 14064-1):

- Electricity/natural gas consumption (processes, heating)/heating oil consumption
- Fuel consumption (petrol and diesel)/business trips/employee mobility
- Transport of primary materials and products (inbound, outbound)
- Production of primary materials/auxiliary and operating materials (protective caps, preservative paint, paints and varnishes, thread grease, gases)
- Waste balance; property; utilisation; end of life; investments; greenhouse gas sinks

Around 91% of indirect GG emissions are caused by raw material. Transporting products to customers accounts for a total of approx. 5% of indirect GG emissions. Indirect emissions from natural gas consumption cause 2% of emissions.

Total consideration (ISO 14064-1):



8.3 Environmental Product Declaration (EPD)

In 2022, the production of an Environmental Product Declaration (EPD) was finalised. The purpose of an EPD is to determine the environmental effects of products on the basis of a life cycle analysis. An EPD is drawn up on the basis of the standards EN 15804+A2 and ISO 14025, and is checked and verified by independent third parties. The voestalpine Tubulars declaration is listed and published by Institut Bauen und Umwelt e.V. (IBU).

The voestalpine Tubulars EPD was produced for the product "seamless tube". The issue date of the EPD is 30/03/2022 and the EPD is valid for 5 years, so until 29/03/2027.

System limits taken into account for the ecological report:

- Production stage
  - Raw material supply A1
  - Transport A2
  - Production A3
- Disposal stage
  - Dismantling/demolition C1
  - Transport C2
  - Waste handling C3
  - Removal C4
- Credits and debits outside the system limits
  - Reuse, recovery, or recycling potential D

Result of life cycle assessment – environmental effects as per EN 15804+A2 for 1 tonne of seamless tube

Key indicator	Unit	A1-A3	C1-C4	D
Global warming potential – total	kg CO_2e	3,160	5.44	-1,600
Global warming potential – fossil	kg CO_2e	3,150	5.44	-1,600
Global warming potential – biogenic	kg CO_2e	5.73	-0.02856	-1.04
Global warming potential – LULUC	kg CO_2e	0.965	0.02684	0.232

Fig.: Raw material store

Summary:

When comparing the phases, there is a clear dominance on the part of the production phase (modules A1 - A3), with the environmental effect being chiefly determined by the production of the raw material in the steelworks.

8.4 EcoVadis

In 2024, voestalpine Tubulars underwent a sustainability assessment by EcoVadis and achieved gold status, obtaining a score of 75 out of a maximum of 100.

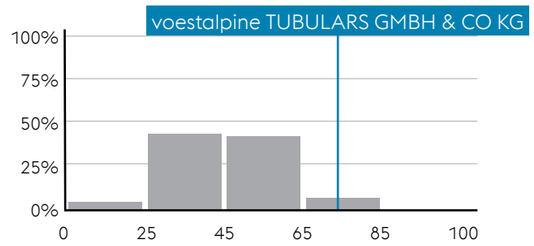
This score puts it in the 96th percentile, placing voestalpine Tubulars among the top 5% of the 100,000 companies assessed by EcoVadis.

In the course of an EcoVadis sustainability assessment, the following topic areas are taken into consideration:

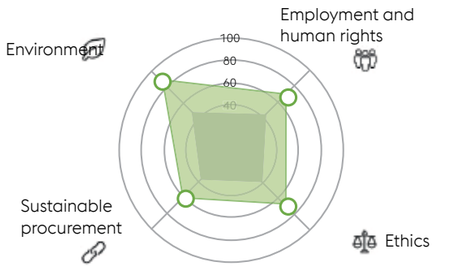
- Environment
- Ethics
- Employment and human rights
- Sustainable procurement

EcoVadis scorecard:

Distribution of overall ratings



Topic points score comparison



In terms of the environment in particular, an above-average score of 90 out of 100 was achieved.

A score of 70 out of 100 was achieved for employment and human rights and for ethics, with employment and human rights being given a higher weighting in the overall assessment.

In the area of sustainable procurement, a score of 60 out of 100 was achieved, making this the lowest scoring area for the company.

Fig.: EcoVadis stickers

8.5 Sustainability projects

Photovoltaic system

The first photovoltaic power plant with 4,200 kVp on the roof of the seamless tube rolling mill commenced operations in February 2023. 10,200 PV modules were mounted parallel to the roof for the installation of this power plant. 15,400 m² of roof space was used.

Fig.: PV system on roof of seamless tube rolling mill

The configuration featuring the central SMA inverter achieves a peak output of 4,200 kW; a major innovation for large industrial operations. A 20 kV transformer located directly next to the inverter integrates the configuration into the internal 20 kV medium-voltage grid. Otherwise, at least 40 inverters would have needed to be installed dispersed over the entire roof.

The solution adopted makes the work of maintenance personnel significantly easier, provides the optimal technical set-up for lightning protection, and represents a major increase in safety when it comes to the operational management of the plant grid, as feed-ins at the low-voltage level result in higher risk potential due to feeders on the secondary side of the transformers when the transformers are disconnected.

voestalpine Tubulars believes an excellent solution for these three issues has been found and that the configuration can be considered a flagship project for large industrial operations.

With a power output of 3,100 kVp, the second photovoltaic power plant installed on the roofs of coupling and automotive production, the testing centre, the warehouse, the quality management area and the mechanical workshops commenced operations in March 2024.

The main challenge posed by this undertaking was the different roof surfaces that needed to be covered. In this case, the same configuration was achieved, featuring a central inverter and feeding into the internal 20 kV plant grid. A steel bridge was installed between coupling and protective cap production to transport the energy from

the various roof areas to a single point in the form of a cable path and connecting path for maintenance personnel, who can in turn access the roof areas from a single point.

7,600 PV modules were mounted parallel to the roof for the installation of this power plant. 11,300 m^2 of roof space was used on 15 different roof shapes.

Heat recovery

To produce the seamless tubes, the raw material billets are heated to 1,300°C in the rotary hearth furnace at voestalpine Tubulars. Thanks to the partnership project with Bioenergie, up to 4 MW of waste heat can be recovered and used to supply heat to the Kindberg municipality, saving up to 3,400 t of climate-impacting CO_2.

More specifically, voestalpine Tubulars has installed a special chimney to recover heat and to centrally collect the exhaust emissions from the rotary hearth furnace. A separate heat exchanger with 1,536 water-carrying pipes has been installed by Bioenergie. A dedicated pumping station on the voestalpine Tubulars site makes the heat obtained in this way available to the new, environmentally friendly district heating network of the Kindberg municipality.

The new 4 MW Bioenergie biomass heating plant near the Kindbergdörfl motorway exit is operated using waste from the wood industry and agriculture and acts as a back-up system and to supplement the heating output. The 9 km long district heating pipeline has been laid underground, starting from the heating plant and running via the sports facilities, through Kindbergdörfl, and continuing via Angerweg to the Kindberg-Ost motorway slip road.

Since September 2023, the surrounding industrial and residential areas, as well as parts of Kindberg, have been supplied with environmentally friendly district heating using the recovered heat from the rotary hearth furnace. All public buildings in Kindberg, such as the community centre, the primary schools, the sports hall and the community-owned housing estates, have been connected.

voestalpine Tubulars will also use a share of the heat energy provided by Bioenergie, which guarantees a secure heat supply with its redundant systems, for building heating systems.

Fig.: Rotary hearth furnace exhaust chimney with heat recovery

Hydropower

voestalpine Tubulars has two hydropower plants on the Mürz, which are currently operated by Wien Energie, for the generation of renewable electricity.

Mürz hydropower plant in Kindberg-Aumühl:

With a drop height of 10.5 m and a flow of 21 m^3/s, the Mürz hydropower plant in Kindberg-Aumühl is located directly on the voestalpine Tubulars premises and has a power output of 2,005 kW.

The Kaplan turbine is installed as an axial installation with bevel gears. The turbine powers the synchronous generator through an angular gear unit.

Electricity generated from the renewable hydropower energy is fed into the plant's dedicated transformer substation UW2 via a block transformer and medium-voltage cable. A Siemens S7 Simatic is used as the control technology. Online monitoring by the operating team is facilitated by a computer connection.

The Aumühl power plant is also used by the APG (Austrian Power Grid) to stabilise the Austrian power grid by preventing blackouts in the event of shortages in the tertiary and secondary control systems.

Mürz hydropower plant in Mürzhofen:

With a drop height of 6.7 m and a flow of 22.2 m^3/s, the Mürz hydropower plant in Mürzhofen was constructed roughly 1.5 km downstream of voestalpine Tubulars land and also supplies generated electricity to the plant's dedicated transformer substation UW3. The power output of the power plant is 1,361 kW.

The turbine is an axial turbine with bevel gears and a horizontal shaft.

The Mürzhofen power plant is also used by the APG (Austrian Power Grid) to stabilise the Austrian power grid by preventing blackouts in the event of shortages in the tertiary and secondary control systems.

The generation factors of the two hydropower plants result in an expected generation of 14.753 GWh/a.

Wind farms

Fig.: Aerial view of the Stanglalm wind farm area

The electricity purchasing pool for the voestalpine sites in Styria has concluded a multi-year PPA agreement with Windheimat for the exclusive supply of the voestalpine sites. With forecast annual energy generation of 90 GWh for the Stanglalm wind farm and 45 GWh for the farm in Hochpürschtling, the two wind farms will also supply voestalpine Tubulars with around 8% of the annual quantities generated.

This results in a forecast wind energy supply of 10.8 GWh each year for voestalpine Tubulars.

E-charging stations

Since 2024, voestalpine Tubulars employees and external parties have been able to access 14 charging stations in the car parks at the front of the site and 14 inside the plant itself.

The maximum charging capacity of each station is 22 kW, which means that electric cars can be fully charged within an average of two to three hours. The E-charging stations are supplied by the company's own PV system.

Energy efficiency project in line with the action plan

voestalpine Tubulars has been certified in accordance with the international standard ISO 50001 since 2012. As part of the certification, an annual action plan to define the energy efficiency projects needs to be created and then published in the annual management review.

The projects that have resulted in the greatest energy savings (> 1,000 MWh/a) are as follows:

- 2023: Adaptation of the rotary hearth furnace – 3,930 MWh per year (furnace space expanded, new torch)
- 2023: Heat recovery – 6,673 MWh per year (supplied to the district heating network)
- 2023: Hardening furnace 1 – 1,208 MWh per year (exhaust system improved)
- 2018: Tempering furnace 1 – 1,705 MWh per year (air vents replaced)
- 2017: Tempering furnace 1 – 3,135 MWh per year (furnace control)
- 2016: Hardening furnace 1 – 1,978 MWh per year (installation of low NOx torch)
- 2014: Hardening furnace 1 – 5,495 MWh per year (implementation of tracking system, recovery heat exchanger)

Energy efficiency projects in the 2024 calendar year:

- Low-pressure tube blank furnace – 312 MWh per year (installation of low-pressure air generator)
- Compressed air – 114 MWh/a (installation of a higher efficiency air compressor)
- LED production hall lighting – 150 MWh/a (LED and daylight control)
- Energy-efficient refurbishment of production hall roof – 300 MWh/a (CT and technical laboratory area)
- 2nd door air curtains for the coupling shop – 34 MWh per year (reduced heat loss)
- Roller basket workshop hall heating – 40 MWh/a (installation of bright radiators with control)

8.6 Sustainable products

Dope-free threaded connections (DryTec®)

The project concept for DryTec® came about in 2008 and was developed for series production by 2016. DryTec® is a lubricant-free alternative for premium threaded pipe connections with the ability to boost efficiency and safety when installing pipes on site while helping to protect the environment.

Using DryTec® offers the following advantages:

- In the case of threaded connections with thread dope, the transport/storage compound needs to be removed and assembly compound applied prior to installation. By contrast, threaded connections with DryTec® are ready to install, making DryTec® easier to handle while saving resources.
- Excess thread compound can clog sand sifters, valves, and perforated tools, which can result in signal line failures and contaminate drilling fluids.
- Compared to thread compound, DryTec® offers additional protection against corrosion during transport and storage. It eliminates the risk of faults that may arise due to the application of too much or too little lubricant.
- DryTec® connections are ready to install. In contrast to connections with thread compound, no water is required to remove transport/storage compound. For this reason, DryTec® simplifies preparation for on-site installation work.
- Compared to thread compound, DryTec® does not lead to contaminations on the field or in the drill hole. It increases safety for on-site operating staff and reduces environmental impacts (e.g. protects groundwater).

Pipes and systems for hydrogen management

A large number of R&D projects are dedicated to the focus area of hydrogen at voestalpine Tubulars. A total of 20 projects are currently looking into key topics in this area.

The main research and development activities for the individual topic areas are summarised below:

Materials

- Development of high-strength (yield strength up to 500 MPa) and ultra-high-strength (yield strength up to 1,000 MPa) steels with compressed hydrogen resistance up to 1,000 bar. These steels are used in underground storage tanks for storing hydrogen (similar to gas reservoirs).

Threaded connections

Development of hydrogen-tight premium connections for use in underground storage tanks and for high-pressure storage tanks used to store hydrogen. voestalpine Tubulars has developed the VAhyper® premium connections for these applications to ensure a hydrogen-tight connection for pipes up to a pressure of 1,000 bar.

Hydrogen storage systems

Hydrogen storage systems consist of the two components listed above; a steel pipe made of H_2-resistant steel and an H_2-tight threaded connections. The systems are being developed for stationary and mobile applications.

» Stationary hydrogen storage systems
These systems contain pipes that are sealed with screwed end caps. The storage capacity and pressure level are variable and can be flexibly adapted to suit customer requirements.
The storage tanks can either be executed as large-volume storage tanks at medium pressure (350 to 500 bar) or with smaller storage volumes at high pressures (up to 1,000 bar) as intermediate storage tanks in hydrogen fuelling stations, for example.

A prototype is currently being produced for this product development. This will be accompanied by TÜV approval of the storage system.
Seamless steel pipes are also used for storing hydrogen underground. Existing and newly constructed underground gas storage tanks are being prepared for hydrogen injection.

The hydrogen gas is fed in and out via borehole piping featuring casing and tubing that is also used in conventional gas reservoirs. The main difference lies in the H_2 resistance of the steel pipe used and the H_2 tightness of the threaded pipe joint.

voestalpine Tubulars is involved in several European projects for underground hydrogen storage as a pipe supplier and development partner. Successful installations and tests have been carried out in various projects.

Numerous academic publications have been and will continue to be published on the topic of these projects.

» Mobile hydrogen storage systems
A technically similar design to the stationary storage systems, namely a steel hydrogen transport container, is being developed as part of the H2RailTube project. This multimodal container (rail and road) offers a sustainable storage solution compared to the storage tanks made of carbon fibre composites currently in use.

A demonstrator for a hydrogen transport container is currently in the works for this project and will be developed by 2026 as part of the EU rail project TRANS4M-R. With this development, it will be possible to transport 920 kg of hydrogen by rail using a 40 ft container, thereby ensuring the final kilometres of hydrogen transport to remote areas.

The second project involving a mobile hydrogen storage tank is the development of steel cylinders made from ultra-high-strength steel for use in hydrogen storage tanks for fuel cell vehicles at a storage pressure of 700 bar. Made from voestalpine Tubulars tubes, these steel cylinders will be installed by a leading OEM in its vehicles as a sustainable alternative to carbon fibre tanks.

Product solutions for geothermal energy

Standard tubes (OCTG) based on API Specification 5CT are used for geothermal applications. The threaded pipe joint used must be gas-tight, as deep geothermal boreholes (400 to 5,000 m deep) can also lead to the formation of gaseous water vapour. As a result, premium connections such as VAsuperior® are primarily used for these applications.

The threaded connection developed by voestalpine Tubulars offers the advantage of a metal seal seat to ensure borehole integrity, even for complex external loads. The thread design protects the threading during transport, handling, and installation in the field and the simple and quick make-up (screwing in the field) significantly shortens installation time. An internal coating can also thermally insulate the pipes to increase the service life and flow rates.

Pipes from voestalpine Tubulars are used in the underground piping from the heat exchangers to the reservoir.

greentec steel seamless tubes (steel production transformation)

As part of the green transformation, the voestalpine Group needs to significantly reduce the carbon emissions caused by the production and processing of its products by 2030. Accounting for roughly 10% of carbon emissions, the steel industry is one of the main contributors to global carbon emissions.

As the raw material for voestalpine Tubulars is largely provided by the voestalpine Stahl steelworks in Donawitz, hybridising the current production route by commissioning a smart electric arc furnace (EAF) and the associated major improvement in the scrap rate can help to significantly reduce carbon emissions. However, the higher scrap rate also involves higher concentrations of undesirable by-elements in the steel such as copper, nickel, molybdenum, lead, and tin, which can negatively impact material properties in premium steel pipe products. To counteract this, an alloy model is now used to compensate for any effects on the material quality and ultimately achieve an equivalent or superior steel quality, as required. By adapting the process and making specific variations to the alloy elements (in line with the corresponding specifications), the voestalpine Group aims to achieve equivalent or superior product properties.

All activities relating to sustainable steel production and the manufacture of steel pipes from sustainable steel are united under the greentec steel brand at voestalpine. At present, the impact of the technology transformation on the product quality of seamless steel pipes is being looked into and reviewed in R&D projects. The alternative alloy models required as a result are being developed and validated in parallel with the conversion of plant technology. This ensures that the process changes associated with the transformation in 2027 are compensated for with suitable measures to guarantee stable or even improved product quality for seamless steel tubes. In concrete terms, this entails the gradual conversion of the seamless steel tube product range to a carbon-reduced steel base from this point – greentec steel seamless steel tubes.

Timetable with milestones for greentec steel:

2022
Supervisory board greenlights greentec steel transformation project: Start of preliminary work

2023
Supervisory board approves €1.5 billion investment in electric arc furnaces (EAFs) in Linz and Donawitz
Groundbreaking ceremonies for the EAFs in Linz and Donawitz – Austria's largest climate protection programme

2024
Construction starts on both EAFs

2027
Commissioning of electric arc furnaces in Linz and Donawitz and decommissioning of two coal-fired furnaces

From 2027
2.5 m tonnes of CO_2-reduced steel annually

By 2029
Target: -30% CO_2 emissions
From 2030 to 2035
Further replacement of one furnace each in Linz and Donawitz
Target reduction of -50% in CO_2 emissions

2050
The goal is to produce steel with net zero CO_2 emissions

ToughTubes® – thermomechanically rolled seamless steel tubes

A major step was made towards a sustainable product and sustainable production with the market launch of thermomechanically rolled seamless steel tubes under the "ToughTubes®" brand back in 2008. The technology for this product was developed in-house, prepared for series production and has been a USP for voestalpine Tubulars ever since the brand was launched. The technology is covered by worldwide patent protection.

This process allows the production of seamless steel tubes with maximum strength and impressive toughness directly from the rolling heat after the final forming step in the tube rolling process. Direct implementation in the tube rolling process avoids an additional, energy-intensive heat treatment. With a production volume of approx. 25,000 t/a, this process results in carbon savings of approx. 3,750 t/a.

8.7 Sustainable processes

voestalpine Tubulars decarbonisation process

As part of the NEFI greensteel project (NEFI = New Energy for Industry), a decarbonisation concept is being developed together with project partner AIT for the voestalpine Tubulars production site. More specifically, all processes involving the use of fossil fuels are being reviewed and a switch to potential alternative energy sources is being looked into on the basis of certain scenarios.

These reviews are focusing on natural gas-fired heating furnaces, with half of the emissions produced by one main heating unit; the rotary hearth furnace.

As part of this project, a comprehensive concept for climate-neutral steel production is being developed in six project phases:

1. Identifying carbon-neutral energy sources to replace natural gas in steel processing
2. Developing efficient industrial furnaces that can be heated with 100% carbon-neutrality
3. Ensuring high product quality when switching to carbon-neutral energy sources
4. Demonstrating the developed concepts and technologies at real production sites for various voestalpine product lines
5. Preparing to scale and transferring the concepts and technologies to other production sites within the voestalpine Group and in other sectors
6. Obtaining social acceptance and trust in the developed solutions

Demand scenarios are calculated for the possible alternative energy sources, namely electricity, hydrogen, biogas, and wood gas, and the carbon footprint is established on this basis. The decarbonisation concept for the production site is then developed on the basis of these scenarios. As a matter of course, other processes such as building heating or on-site transport will also be reviewed with regard to decarbonisation.

Hydrogen as an alternative energy source for heating and transport processes:

Hydrogen is being closely considered as an alternative energy source. These considerations are also taking place in line with the national hydrogen strategy for Austria, which is being developed under the leadership of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK). Internal plant considerations range from demand, on-site distribution, potential on-site generation, e.g. surplus energy from photovoltaic and hydropower plants, to the purposeful use of hydrogen in processes, primarily heating and transport processes.

Using hydrogen in testing technology for our product developments closes the on-site loop.

In addition to reviewing the hydrogen compatibility of all torches, installation parts and pipelines in the heating furnaces, the impact of the hydrogen found in the flue gas on product quality is also being scientifically investigated as part of a cooperation project with university partners. According to current findings, the main impact would be on scaling on the steel surface and the decarburisation depth in the edge area of the tube near to the surface.

9 KEY ENVIRONMENTAL INDICATORS

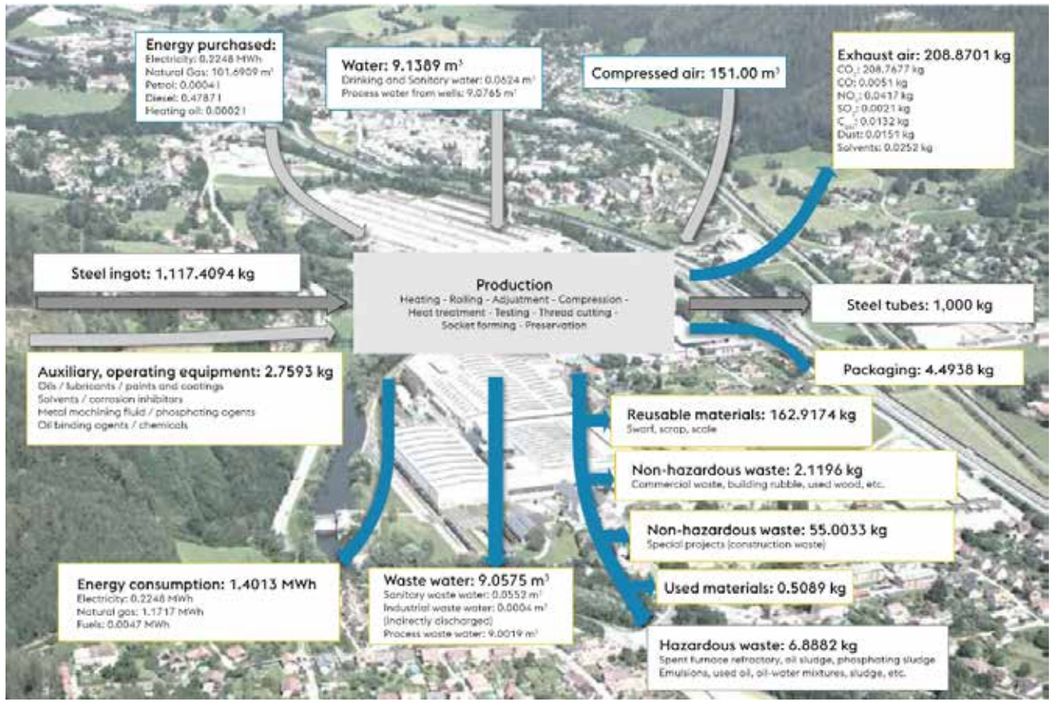
Environmental performance indicators

The environmental performance indicators are based on the environmental data and figures from the input/output analysis. However, it is not the absolute figures but the specific values relative to the production volume that are viewed as the environmental performance indicators in each case.

Production volume = inventory generated during the period under consideration from hot tube production

Production volume 2024: 273,977.213 t

Material and energy analysis for the production of 1 t of steel tube (2024)



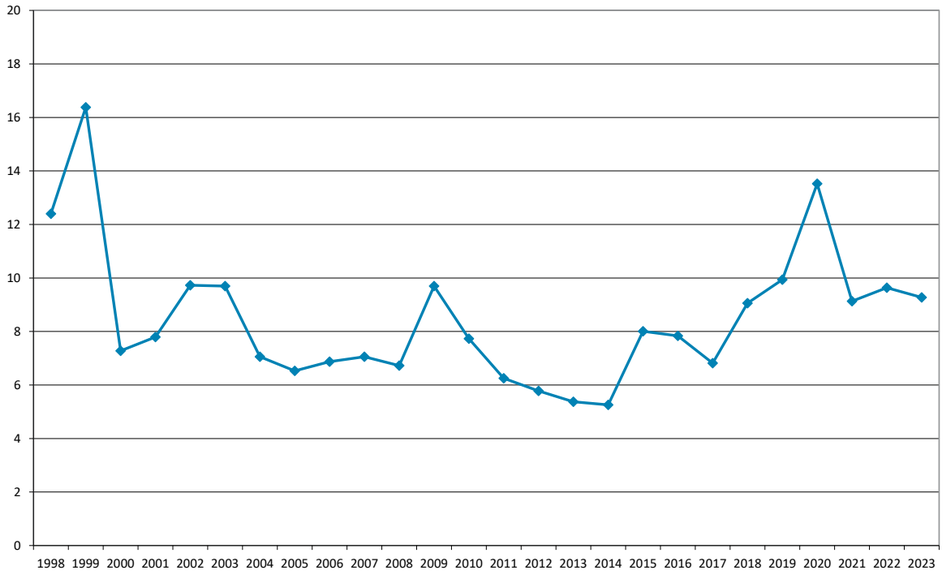
As can be seen from the analysis, the production of 1,000 kg of steel tube requires the use of 1,117.409 kg of raw material, representing a yield of 89.49%.

The environmental performance indicators are heavily dependent on the capacity utilisation of the factory, as all environmental indicators are relative to production volume. This means that high capacity utilisation and the associated high production levels have a positive effect on all environmental performance indicators, i.e. on the specific inputs and outputs.

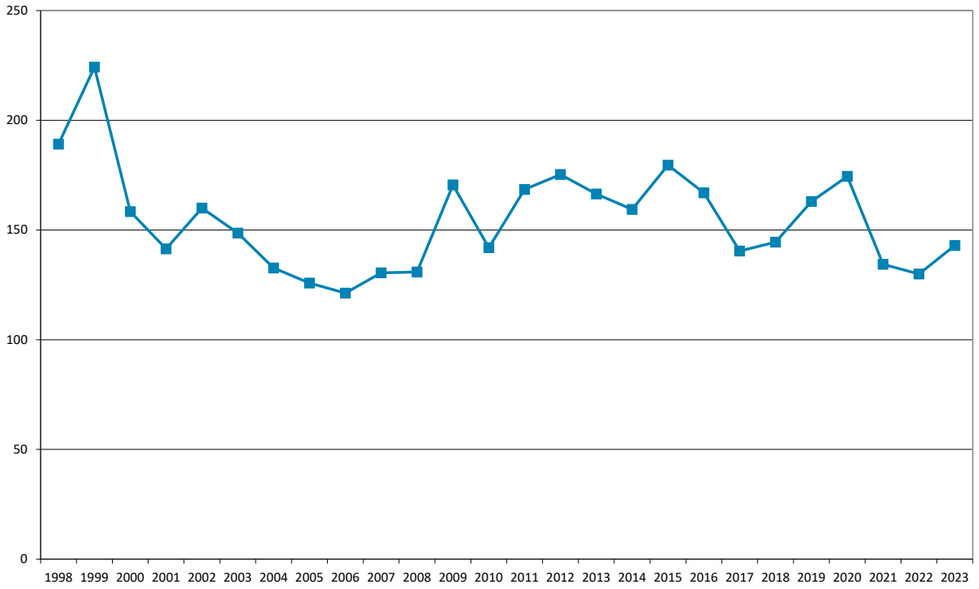
9.1 Development of environmental indicators (input) since 2000

INPUT	Water consumption in m^3/t	Compressed air consumption in m^3/t	Natural gas in m^3/t	Electricity in MWh_{el}/t
2000	7.28	158.38	96.66	0.208
2001	7.79	141.43	93.32	0.194
2002	9.73	160.02	100.94	0.211
2003	9.70	148.61	95.95	0.195
2004	7.06	132.68	96.08	0.192
2005	6.53	125.80	87.40	0.171
2006	6.87	121.26	86.51	0.170
2007	7.06	130.51	87.78	0.178
2008	6.72	130.87	88.08	0.179
2009	9.69	170.53	105.72	0.227
2010	7.73	141.92	94.37	0.191
2011	6.25	168.46	86.56	0.180
2012	5.78	175.31	85.66	0.175
2013	5.38	166.40	86.96	0.184
2014	5.26	159.37	84.59	0.182
2015	8.01	179.55	98.39	0.217
2016	7.83	166.94	98.72	0.219
2017	6.82	140.44	89.42	0.199
2018	9.06	144.43	87.72	0.199
2019	9.94	163.01	93.81	0.215
2020	13.52	174.43	112.51	0.252
2021	9.13	134.36	97.07	0.201
2022	9.64	115.70	93.93	0.193
2023	9.27	142.95	97.58	0.217
2024	9.14	151.00	101.69	0.225

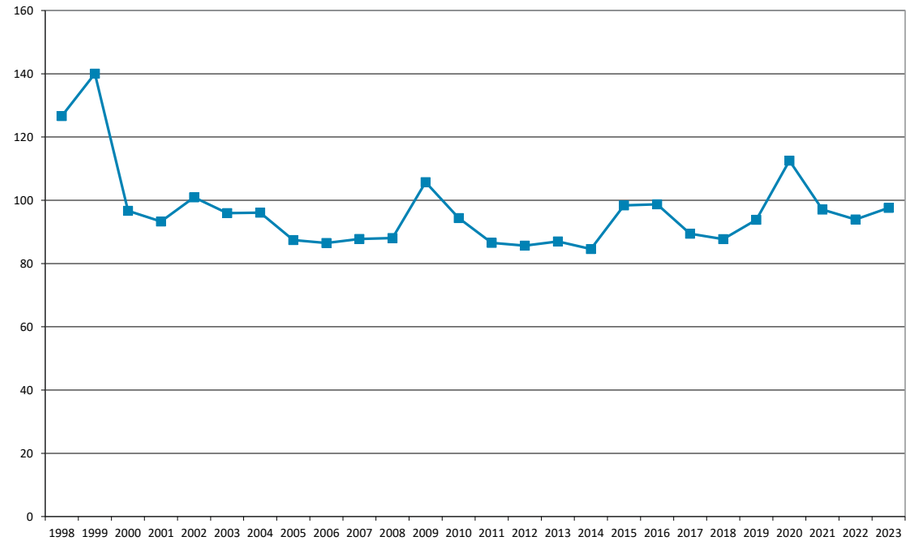
Specific water consumption in m^3 per t from 1998 to 2024:



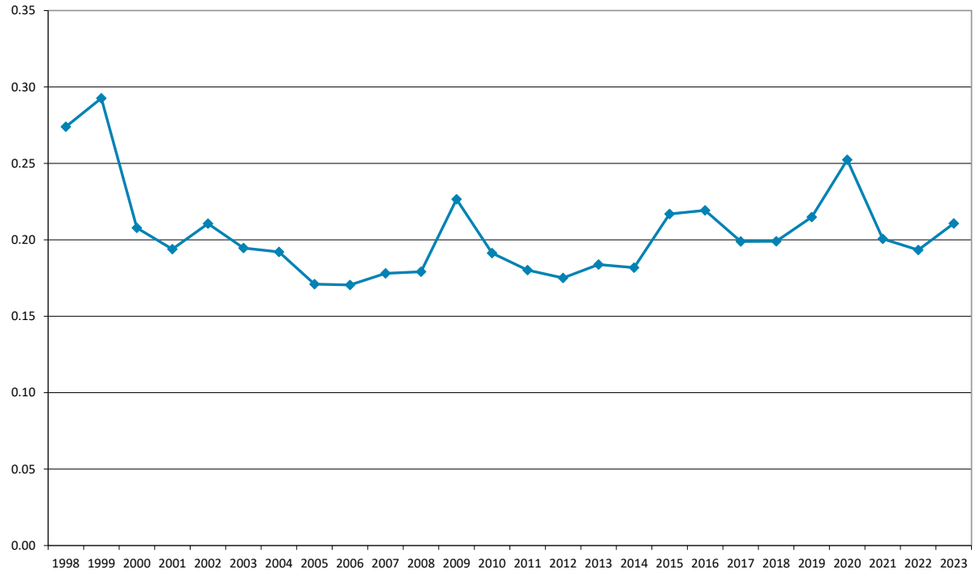
Specific compressed air consumption in m^3 per t from 1998 to 2024:



Specific natural gas consumption in m^3 per t from 1998 to 2024:



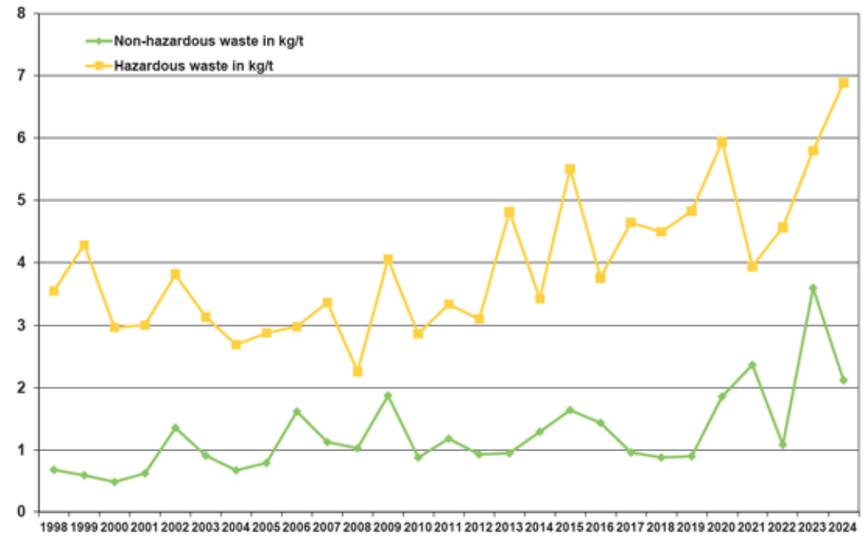
Specific electricity consumption in MWh per t from 1998 to 2024:



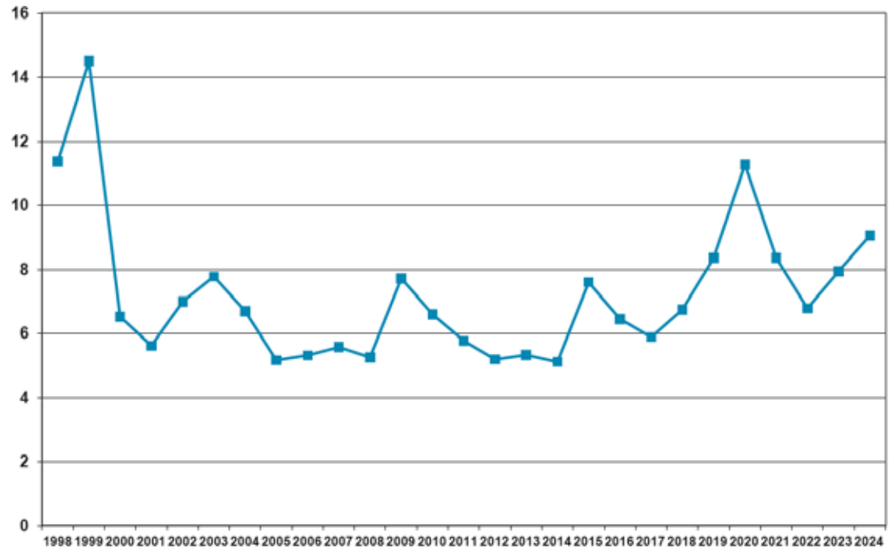
9.2 Development of environmental indicators (output) since 2000

OUTPUT	Non-hazardous waste in kg/t	Hazardous waste in kg/t	Waste water in m^3/t	Exhaust air in kg/t	Energy consumption in MWh/t
2000	0.48	2.96	6.53	194.3	1.284
2001	0.62	3.01	5.62	187.4	1.232
2002	1.35	3.82	7.00	202.7	1.335
2003	0.91	3.14	7.78	192.6	1.263
2004	0.67	2.69	6.70	192.8	1.262
2005	0.79	2.88	5.17	175.4	1.145
2006	1.62	2.98	5.32	173.7	1.134
2007	1.13	3.37	5.58	176.2	1.156
2008	1.02	2.26	5.26	176.8	1.161
2009	1.87	4.05	7.72	212.4	1.405
2010	0.87	2.86	6.60	189.4	1.243
2011	1.18	3.34	5.77	173.7	1.145
2012	0.93	3.10	5.19	171.9	1.130
2013	0.95	4.81	5.33	174.6	1.153
2014	1.29	3.43	5.12	169.8	1.125
2015	1.64	5.51	7.60	197.6	1.314
2016	1.43	3.76	6.46	198.3	1.320
2017	0.96	4.64	5.93	179.6	1.196
2018	0.88	4.49	6.75	176.2	1.194
2019	0.90	4.82	8.36	188.6	1.281
2020	1.86	5.94	11.28	231.6	1.532
2021	2.37	3.94	8.37	199.90	1.303
2022	1.08	4.57	6.79	192.93	1.267
2023	3.60	5.80	7.95	200.66	1.337
2024	2.12	6.89	9.06	208.87	1.401

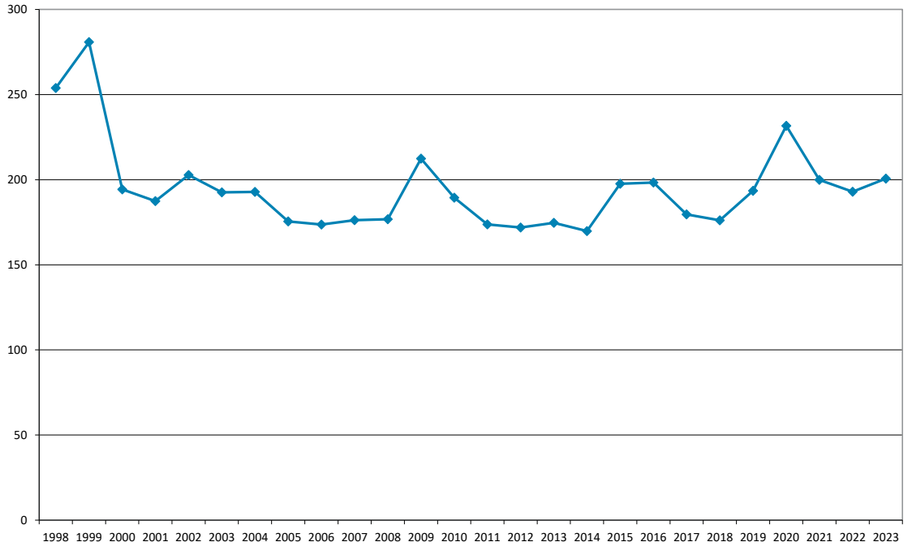
Specific waste accrual in kg per t from 1998 to 2024:



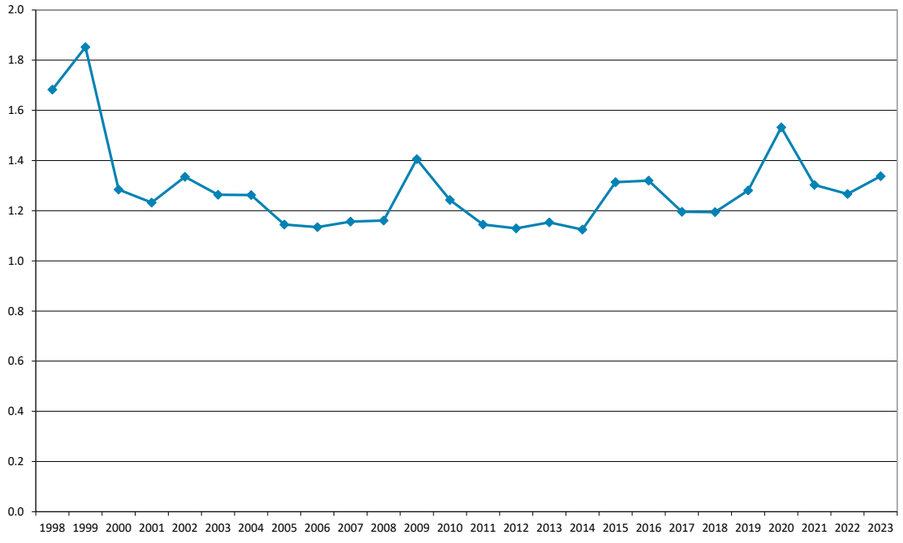
Specific waste water accrual in m^3 per t from 1998 to 2024:



Specific exhaust air accrual in kg per t from 1998 to 2024:



Specific energy consumption in MWh per t from 1998 to 2024:



10 COMPLAINTS

There were no complaints from nearby residents in 2024.

11 EMERGENCY CONTINGENCIES/INCIDENTS

voestalpine Tubulars has company fire and rescue services at the Kindberg site. There are emergency plans for various scenarios which are practised at regular intervals.

Fig.: Company fire service exercise

Fig.: Company fire service deployment

The emergency plans are part of the works alarm plan, which incorporates the fire safety rules, evacuation plans, fire safety plans, emergency exit and escape route plans, safety zone plans, and a business contingency plan.

There were no incidents relevant to the environment in 2024.

In August 2023, oil leaked into the receiving waterway, the river Mürz, as a result of cleaning in the area of the seamless tube rolling mill water management system during inspection work. Any major contamination of the water was prevented by the rapid deployment of the company fire service, which set up oil containment barriers and applied oil binding agents.

Processes for cleaning the cleaning tanks have been optimised and two oil separators will be installed in 2024 – one in the seamless tube rolling mill overflow area and one upstream of the discharge point for operational waste water into the receiving waterway.

12 LIMIT VALUES EXCEEDED

In 2024, external waste water analyses indicated an elevated measured value for nitrate and nitrite in the waste water flow from the neutralisation plant – see the “Water/waste water” section. Despite intensive efforts to optimise processes in the waste water treatment plant, the limit value of 40 mg/l of nitrate and 1.0 mg/l of nitrite as officially defined cannot be reliably adhered to.

In terms of temporary exceedance of the limit values for the specific waste water concentrations of nitrate and nitrite, it is important to note that the total contaminant loads are significantly below the authorised amounts.

	Nitrate	Nitrite
Authorised total contaminant load/year	700.80 kg	17.52 kg
Total contaminant load brought in during 2024	51.39 kg	0.43 kg
Utilisation rate	7.33%	2.48%

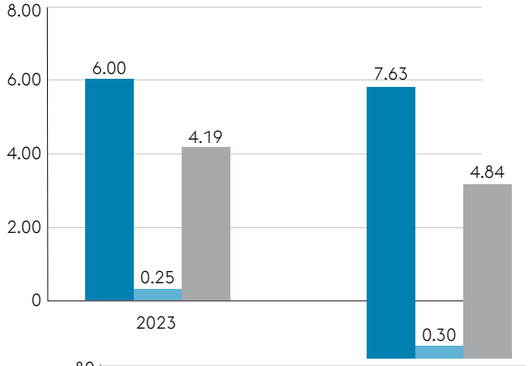
In agreement with the competent authority, the waste water from the neutralisation plant will no longer be discharged directly into the Mürz receiving water, but via the local authority's waste water sewer system into a treatment plant, where significantly higher limit values apply for nitrate and nitrite, which are not exceeded.

13 ACCIDENT STATISTICS

In 2024, the Kindberg plant completed 1,560,834 hours of production. There are 970 employees on the payroll (average figure for the year 2024).

		2023	2024
Accident rate	Accidents per 100 employees	6.00	7.63
Accident frequency	Accidents per million hrs	36.29	47.41
Accident severity	Lost working hours per accident	69.80	63.37
Absence due to accidents	Absence as % of working hours	0.25	0.30
Working hours lost	Per year and employee	4.19	4.84

The accident statistics include all reported work accidents (with/without loss of working hours) involving paid staff.

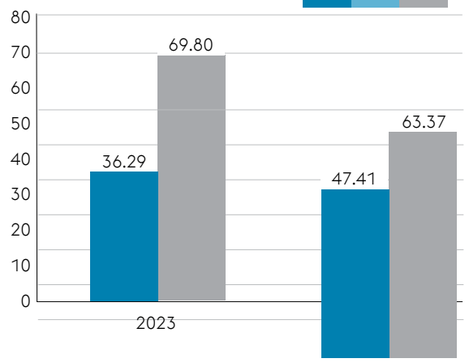


Accident rate
Absence due to accidents
Working hours lost

Accident rate =
accidents per 100 employees

Absence due to accidents =
absence as % of working hours

Working hours lost =
hours per year and employee



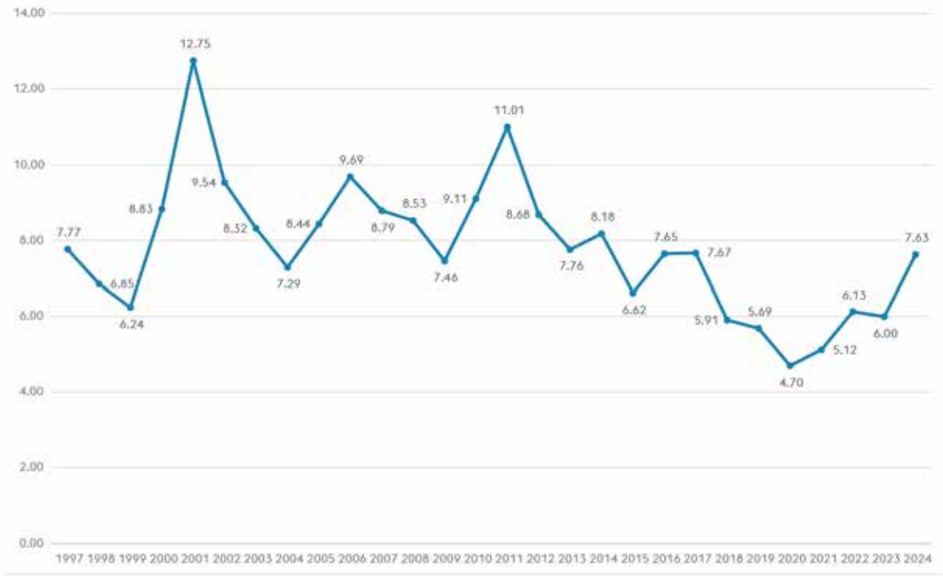
Accident frequency
Accident severity

Accident frequency =
accidents per 1 million hours

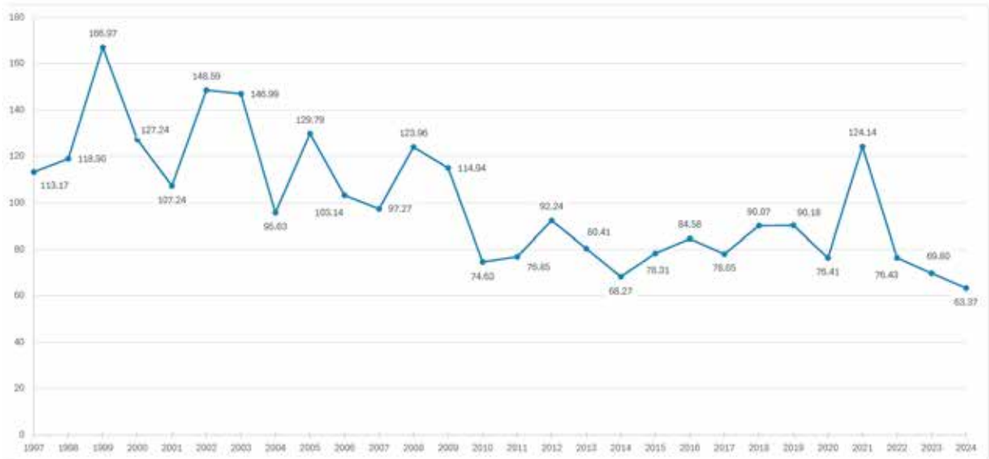
Accident severity =
hours absent per accident

In the development of the accident figures, the accident rate increased by 27.17% in 2024 when compared to the year before (from 6.00 in 2023 to 7.63 in 2024). The severity of accidents (absence per accident in hours) decreased by 9.21% (from 69.80 to 63.37) when compared to the year before.

Accident rate (accidents per 100 employees) from 1997 to 2024:



Severity of accidents (absence per accident in hours) from 1997 to 2024:



14 ENVIRONMENTAL PROGRAMME 2025/26

For the FY 2025/26 (01/04/2025 to 31/03/2026), a quality, environmental, energy, health & safety, asset management and information security programme has been drawn up and approved by the executive management.

No.	Topic	Target	Programme	Managed by	Deadline
MANAGEMENT SYSTEMS					
1	ECM certification	Approval for internal rail-bound vehicles to use the public railway network	Obtaining ECM certification for the maintenance of rail-bound vehicles	TM	September 2025
SUSTAINABILITY					
2	Greenhouse gas report	Knowledge of the company's current greenhouse gas emissions and that of the product	Annual update and verification of the greenhouse gas emissions in accordance with ISO 14064-1 and ISO 14067	TM	March 2026
INPUT MATERIALS					
3	Mandrel lubricant	Use of a more environmentally responsible and health-friendly mandrel lubricant	Replacement of the existing mandrel lubricant with a boron-free lubricant	TN1	February 2026
WASTE					
4	Overview of waste collection points	Overview of company waste collection points	Creation of an up-to-date overview of waste collection points at the site	TM2	February 2026
5	Seamless tube rolling plant waste storage	Optimisation of storage and marking of waste in the seamless tube rolling plant	Execution of a project as part of "Ökoprofit"	TM2	February 2026
6	Paperless administration	Reduction of paper waste in the cutting section	Work papers sent to workstations in digital format	TN31	February 2026
WATER/WASTE WATER					
7	Cleaning system for system components and vehicles	Targeted collection of all washing water from the cleaning system and discharge into the public sewer system	Establishment of a central cleaning system for system components and company vehicles in the seamless tube rolling plant area	TA3	December 2025
8	Indirect discharge neutralisation	Reduction of nitrate and nitrite input into the Mürz receiving water through waste water from the neutralisation plant	Indirect discharge of waste water from the coupling phosphatisation neutralisation plant	TM	December 2025
EXHAUST AIR					
9	Grinding area extraction system	Reduction of workplace pollution at the grinding area in the coupling shop	Installation of a new extraction system for grinding work	TN32	February 2026
10	Tool changing head workshop ambient air	Improvement of the ambient air in the tool changing head workshop in coupling shop	Replacement of the existing gas radiators with electric radiators and installation of an air-conditioning unit	TN32	February 2026
ENERGY					
11	klima:aktiv	Award for a project submission on the topic of energy efficiency	Completion of a project as part of klima:aktiv	TM2	October 2025
12	Compressed-air production	10% reduction in energy consumption and reduction in maintenance costs for compressed-air production	Production of compressed air using a screw and turbo compressor	TA	March 2026
13	Water management CT and heat treatment 2 modernisation	Energy saving in water management CT (>951 MWh/a) and heat treatment 2 (>529 MWh/a)	Demand-based supply of industrial water through process optimisation and system modernisation	TA2	February 2026
14	Cutting section L1 and finishing heating control	1% gas saving for production hall heating in cutting section L1 and finishing	Integration of remaining bright gas radiators into the existing control with installation of additional controllers	TA4	October 2025
15	Hardening furnace 1 floor refurbishment	Energy saving in hardening furnace 1 with 1% energy loss reduction	Refurbishment of furnace floor with repair of refractory materials	TN2	February 2026
16	Production hall temperature optimisation	Constant production hall temperature of 18 °C throughout the day in cutting operation during the winter season	Establishment of an automatic control system	TN31	February 2026
TRANSPORT					
17	Intermodal transport	Establishment of a sustainable supply chain solution for transport	Development of a new intermodal concept with rail collection and onward transport by trucks	KL	September 2025

SAFETY					
18	Improved work safety	Reduction in occupational accidents to a maximum LTIFR value of 7.3, equivalent to a 10% reduction on the year before	Continuation of the “consciously safe” programme, safety discussions, improvement of initial training for new employees, monthly focus topics	TM3	March 2026
19	Tube sample manipulation	Safe handling and easier handling of tube samples in incoming goods inspection of oilfield tube finishing	Construction of a manipulator in the Trennjäger area	TN2	February 2026
20	Ear protection	Ensuring the use of ear protection at high-noise workstations in the cutting section	Raising employee awareness through training, mini-workshops and regular sessions on the topic of “wearing ear protection”	TN3	February 2026
21	Exoskeletons	Reducing physical strain on employees at selected workstations	Selection of suitable exoskeletons for the cutting section	TM3	May 2025
22	Safety inspection checklist	Help with carrying out safety inspections	Creation of a checklist for safety inspections	TM3	December 2025
HEALTH					
23	Improving health	Reaching a high health level with a health rate of ≥94.5%	Implementation of preventative health measures	TM4	March 2026
24	Mental health management measures	Maintaining mental health management presence and increasing health awareness	High number of mental health management measures and programmes of >50/year	TM4	January 2026
25	Mental health management participation rate	High participation rate for mental health management courses and events of >30% of the average number of employees	Target group-oriented measures planning, participation	TM4	January 2026

The IMS programme and, therefore, all environmental, energy, and health & safety targets are approved by the executive management.

15 LEGAL COMPLIANCE

To ensure legal compliance, the legal requirements relevant to the company in the areas of the environment, occupational health & safety, and energy legislation were identified.

The tool used for this purpose is a legislation database that is updated every three months.

The database is administered and updated by the Management Systems department.

The procedure for assessing the legal requirements comprises the following steps:

- Assessment of the legal requirements to determine relevance to the company
- Where relevance is identified, determination of the resulting obligations and categorisation of these obligations as one-off or recurring tasks
- Definition of responsibilities (responsibility holders, task performers) for fulfilment of the legal obligations including definition of tasks, deadlines, and intervals in the legislation database
- Creation of fulfilment notifications regarding completed tasks, also in the legislation database
- Ongoing monitoring of fulfilment of the tasks by the Management Systems department

Information about new/due tasks is issued electronically via e-mails to the responsibility holders and task performers. A reminder interval can be defined for all tasks so that e-mail notifications about outstanding tasks are automatically triggered in plenty of time.

As well as the legal requirements, the legislation database also includes all official notices and imposed conditions, with tasks arising from officially imposed conditions being entered in the database along with legal obligations.

At present, it is possible to generate a legislation register with a list of all relevant legal requirements, as well as a summary of the compliance fulfilment level of the legal requirements, from the legislation database.

A report as of the current date in accordance with Section 82b of the Austrian Trade Regulations (Gewerbeordnung) can be produced.

Compliance with the legal requirements is verified by inspections and internal audits.

Each month, the Management Systems department carries out an analysis of the legislation database and simultaneously reports the status to the senior management.

Based on the analysis, an assessment of legal compliance is made. There is no indication of any breaches of the law.

16 GENERAL INFORMATION

We are happy to answer any questions about environmental protection at our company.

voestalpine Tubulars GmbH & Co KG

A-8652 Kindberg, Alpinestrasse 17, Austria

Tel.: +43 (0) 50304 23-0

Managing Director: Dipl.-Ing. Gerald Gfrerer

Environmental Officer: Dipl.-Ing. Harald Kohlhofer

Harald Kohlhofer, the environmental officer at voestalpine Tubulars, will be happy to answer any questions about the current environmental declaration, the company's aims and objectives in the area of environmental protection, and the measures implemented thus far.

Dipl.-Ing. Harald Kohlhofer

Tel.: +43 (0) 50304 23-366

E-mail: harald.kohlhofer@vatubulars.com

http://www.voestalpine.com/tubulars

Fig.: Environmental management:
Karin Zisser and Harald Kohlhofer

For the sake of easier readability of the text, either the masculine or feminine form of personal nouns has been used. This does not in any way imply a disadvantaging of the other gender in either case. Men, women and non-binary persons should feel equally addressed by the contents of the environmental declaration.
Thank you for your understanding.

17 DECLARATION OF VALIDITY OF THE ENVIRONMENTAL DECLARATION

The Chief Environmental Inspector and Authorised Signatory

Ing. Marina Paller MBA
of the Environmental Inspectorate
TÜV SÜD Landesgesellschaft Österreich GmbH,
Franz-Grill-Straße 1, Arsenal Obj. 207, 1030 Vienna, Austria
(registration number AT-V-0003)

hereby declares that in accordance with the verification performed, the site as specified in the consolidated environmental declaration of the organisation

voestalpine Tubulars GmbH & Co KG
Alpinestrasse 17
8652 Kindberg-Aumühl, Austria
with the registration number AT-000208

meets all requirements of Regulation (EC) 1221/2009 of the European Parliament and the Council of 25 November 2009 – in conjunction with Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026 – on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS).

This signed declaration confirms the following:

- The inspection and validation were carried out in full compliance with the requirements of Regulation (EC) 1221/2009 as amended by Regulation (EU) 2017/2009 and Regulation (EU) 2018/2026.
- The result of the inspection and validation confirms that there is no evidence of non-compliance with the applicable environmental requirements.
- The data and information in the environmental statement for the site provide a reliable, credible and truthful picture of all activities at the site within the area specified in the environmental declaration.

This declaration may not be understood as equivalent to EMAS registration. EMAS registration may only be carried out by a competent centre according to Regulation (EC) 1221/2009. This declaration may not be used as an independent basis for informing the public.

The **TÜV SÜD Landesgesellschaft Österreich GmbH** environmental inspectorate is officially licensed for NACE code 24.20 by the Austrian Federal Ministry for Agriculture, Forestry, Environment and Water Management.

Landesgesellschaft
Österreich

Kindberg, 10/04/2025

Marina Paller
(Chief Environmental Expert) at TÜV Süd Landesgesellschaft Österreich GmbH
Franz-Grill-Straße 1, Arsenal Obj. 207, 1030 Vienna

The next consolidated environmental declaration by voestalpine Tubulars GmbH & Co KG will be submitted for inspection in March 2026. Yearly updates will be carried out in the intervening period.

voestalpine Tubulars GmbH & Co KG
Alpinestrasse 17
8652 Kindberg-Aumuehl, Austria
Tel. +43 (0) 50304 23-0
sales@vatubulars.com
www.voestalpine.com/tubulars

voestalpine
ONE STEP AHEAD.