

TATA STEEL



Tata Steel Nederland

SUSTAINABILITY REPORT 2021/2022

Together we make the difference

Contents

0		1		2		3		4		5		6	
PREFACE		TATA STEEL NEDERLAND, PRIORITIES & GOVERNANCE		ENVIRONMENT & COMMUNITY		CARBON REDUCTION & SUSTAINABILITY		PEOPLE & SOCIETY		CUSTOMERS & VALUE		ABOUT THIS REPORT	
0.1 Hans van den Berg	3	1.1 Tata Steel Nederland	6	2.1 Impact on the community	13	3.1 Current CO₂ footprint	21	4.1 Employees make the company	32	5.1 Investing in the future	38	6.1 How we report	43
0.2 Annemarie Manger	4	1.2 Tata Steel IJmuiden	7	2.2 Monitoring & measuring	15	3.2 Reorientation of climate strategy	23	4.2 Safety	33	5.2 Research & development	39	Abbreviations and glossary	43
		1.3 Sustainability strategy	8	2.3 External study & action taken	16	3.3 New climate strategy	24	4.3 Health & fitness	34	5.3 Customers & networks	40	Annexes	
		1.4 Stakeholders	10	2.4 Sustainable relationship with the community	18	3.4 Accelerated switch to green steel	25	4.4 Equal opportunities	35	5.4 New products	41	- Key figures	44
		1.5 Governance	11			3.5 Climate strategy in progress	26	4.5 Training	36			- GRI Content Index	
						3.6 CO₂ reduction Downstream Europe	27					- General Disclosures	47
						3.7 CO₂ reduction in logistics	28					- Specific Disclosures	48
						3.8 Raw materials efficiency	29						
						3.9 Responsible purchasing	30						

0.1 Preface

Hans van den Berg

Dear reader,

This is the Tata Steel Nederland sustainability report for the 2021-2022 tax year. The purpose of the report is to provide insight into the steps we are taking to make our company more sustainable. We commit ourselves to the agreements made during the Paris Climate Agreement and the subsequent Climate Agreement between the Dutch government, civic society organisations and businesses. We also commit ourselves to the sustainability goals of the United Nations.

Sustainably produced steel is the future. Our society is built on steel and demand for steel will continue. The washing machines we use are made of steel, just like the cars we drive. Thanks to our rolled steel, our customers can make their products lighter and therefore more sustainable. Steel is also indispensable for the energy transition, such as solar parks or the batteries for electric cars. It is important that we produce steel in a responsible and sustainable way, while improving the impact on our environment and the climate.

Tata Steel Nederland in IJmuiden has one of the most CO₂-efficient steel plants in the world. We realise this is not enough; we need a radical overhaul of the production process to continue making green steel in a clean environment in the future. We realise this must happen quickly and have already started the process.

In September 2021, we announced we would replace our two blast furnaces with a modern technology that will allow us to produce green steel based on hydrogen instead of coal. By 2030, we want to have reduced our CO₂ emissions by 35 to 40%. By 2045, Tata Steel Nederland wants to be fully CO₂-neutral.

'Sustainably produced steel is the future.'

In addition, at the end of 2020 we announced that we would accelerate the reduction of current emissions of dust and we want to significantly reduce the odour, dust and noise nuisance in our community in the coming years. To this end, we have an improvement programme with measures worth more than 300 million euros, which will be largely completed before 2023. A new nitrogen oxide reduction installation is scheduled to be operational in 2025.

To support the transition to green, clean and circular steel production, we have developed a special programme for our leadership team called "Connect, Care and Change". This will stimulate our own people to shape our transition.

The investments in the largest transition in our more than 100 years of existence are enormous. At the beginning of 2022, a renewed sustainable profit programme was launched in order to be able to demonstrate sufficient earning capacity in the coming years. This ensures that we can make the transition possible and create long-term value in our company and our stakeholders.

We are in a strong position to realise our sustainability ambitions. We make high-quality steel products that are in high demand and we have good supply and non-steel product sale routes. One advantage for the future is that we are located close to the offshore wind farms, where a lot of green electricity is generated. We want to achieve our ambitions in close cooperation with local and national governments and with our immediate neighbours. We want to become a green and circular steel producer in the coming years.

I'm signing up to our plans; in the interest of Tata Steel and all employees, and also because it will benefit our customers and society.

Hans van den Berg
CEO and Chairman of the Board of Tata Steel Nederland



'We are in a strong position to realise our sustainability ambitions.'

0.2 Preface

Annemarie Manger

Dear reader,

Tata Steel will be taking radical steps in 2021 to make our operation more sustainable. Producing green steel in a clean environment is our top priority. But the value chain of current steel production also has our full attention. We distinguish four domains, namely People & society, Environment & community, Carbon Reduction & sustainability and Customers & value.

This report explains what we are doing to purchase our raw materials as responsibly as possible. But also how we are already succeeding in reducing CO₂ emissions by structuring the logistics from, to and on the site in a smarter way. Attention is paid to how we want to start producing green steel in our steel plant in IJmuiden before 2030. And how we guarantee the safety and well-being of our team and local residents. Lastly, with a few examples, we highlight how within Tata Steel Downstream Europe, progress is being made in making various locations CO₂-neutral.

As a woman, in an industry that has traditionally been dominated by men, such as the steel sector, I am particularly motivated to give women and minorities a place in this company. A place where they feel at home. Diversity and inclusivity are important themes within Tata Steel Nederland. To underline this, we joined the Workplace Pride Foundation this year.

In the last chapter, under the heading 'Customers & value', we explain how we use innovative applications to help our customers make their products more sustainable.

'Producing green steel in a clean environment is our top priority.'

I see more and more colleagues around me, young and old, who want to be involved in making our company more sustainable. Where previously the sustainability team took the lead, colleagues in IJmuiden and Downstream Europe now come up with proposals to make production processes more efficient and energy efficient and to reduce our emissions. What is striking is that these proposals - some of which

are mentioned in this report - are very specific and therefore easy to implement. I'm proud of all my colleagues who have responded to the challenge. It also gives me confidence, because only together can we accelerate the process of making our company more sustainable.

An explanation of the preparation of this report: Tata Steel reports on sustainability annually.

Until 2008, we did so in a separate report on the operation in IJmuiden, which was then still called Corus. After that, our parent company Tata Steel Limited published about our sustainability. In recent years, we noticed that it was less easy for stakeholders to find what our results were in the Netherlands.

We believe it's important to provide stakeholders with an accessible insight into our sustainability ambitions and results. That is why we have decided to publish this report for Tata Steel Nederland. We choose to report in line with the Global Reporting Initiative (GRI) so our results are verifiable and comparable.

We realise we can always do better. That's why I'm inviting you to discuss with us how we can further improve this report.



Annemarie Manger
Sustainability Director



'I'm proud of all my colleagues who have responded to the challenge.'

1

TATA STEEL NEDERLAND, PRIORITIES & GOVERNANCE



1.1 Tata Steel Nederland

Reliable manufacturer of quality Steel

Tata Steel Nederland is one of Europe’s biggest steel manufacturers. We supply high-quality steel products to demanding customers worldwide. For example, for the construction industry, the automotive industry, the packaging industry and for manufacturers of lifting, mining and earthmoving machinery. Our steel is processed in steel frames for solar panels and batteries for electric cars. We are constantly improving our production processes, using advanced techniques. Together with our customers, we develop new steel products that enable these customers to achieve their sustainability goals.

Since 1 October 2021, Tata Steel Nederland consists of two Business Units: **Tata Steel IJmuiden** (TSIJ), which includes the steel production company, and **Tata Steel Downstream Europe**, which is made up of the group of companies that operate downstream activities in the European Union, Switzerland, Turkey and the United States.

Tata Steel Downstream Europe employs approximately 2,800 people in the Building Systems, Colours, Distribution, Plating and Tubes business units.

Tata Steel Nederland has its registered office in IJmuiden, municipality of Velsen. The ultimate parent company is India’s Tata Steel Limited.

Transformation and division
Until October 2021, Tata Steel Nederland and Tata Steel UK formed part of Tata Steel Europe. This company was created in 2007 when Tata acquired Anglo-Dutch Corus, which in turn was formed in 1999 through the merger of Koninklijke Hoogovens and British Steel.

The division from 1 October 2021 of Tata Steel UK and Tata Steel Nederland arose from the wish and the realisation that both companies can develop more effectively if they stand on their own (again). A so-called Transformation Programme is in progress for both companies, with the aim of improving structural profitability on the basis of customer satisfaction, stability of production, cost reduction and carbon reduction. This Transformation Programme has continued unabated within Tata Steel Nederland (the approach/developments at Tata Steel UK do not fall within the scope of this report).

TATA STEEL NEDERLAND IN FIGURES
2021-2022 YEAR UNDER REVIEW

Total steel production
6.6 million tons of liquid steel

Gross turnover
6.9 billion euro

Investments in installations
215.5 million euro

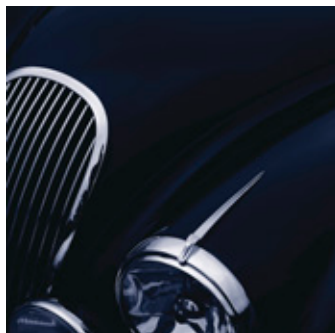
Total direct jobs
11,608

EMPLOYEES TATA STEEL NEDERLAND
2021-2022 YEAR UNDER REVIEW

	9.652
	716
	617
	232
	180
	113
	54
	41

Active in four sectors

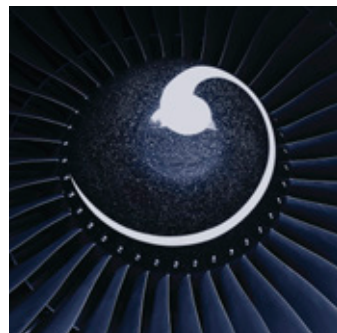
Automotive



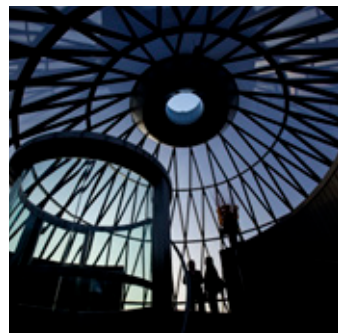
Packaging



Engineering



Construction



1.2 Tata Steel IJmuiden

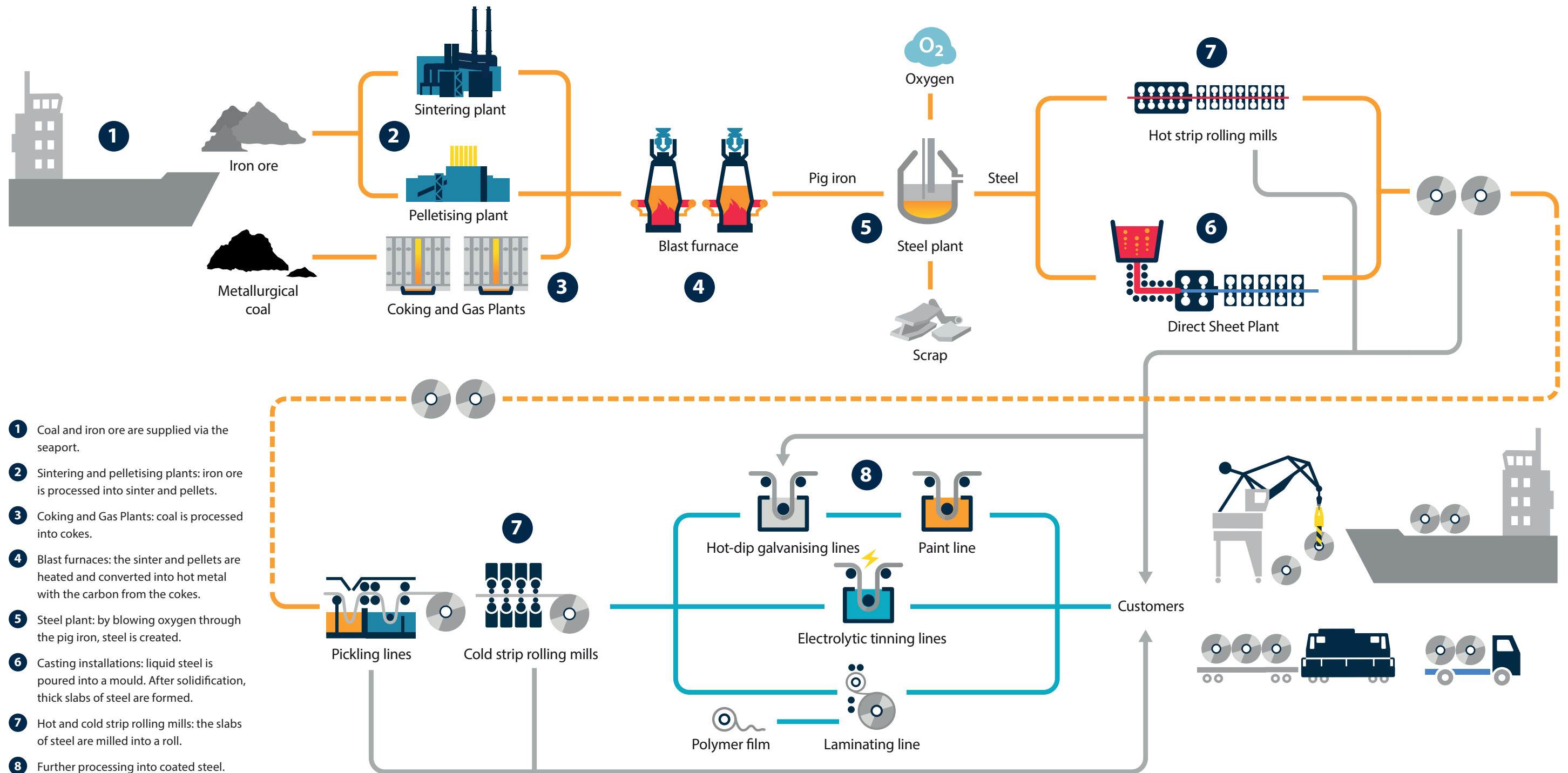
Fully integrated steel company

The steel company of Tata Steel IJmuiden is located on the largest contiguous industrial site in the Netherlands in the municipalities of Heemskerk, Beverwijk and Velsen. At the end of March 2022, this unit had approximately 9,700 colleagues, including trainees and students. In daily practice, employees of service companies also work on our complex.

From the raw materials (coal and iron ore) that are supplied via its own seaport in IJmuiden, Tata Steel produces high-quality (hot and

cold rolled) uncoated and coated steel via continuous production installations. We mainly do this for the automotive and construction, packaging and engineering sectors in Europe. In this context, engineering mainly refers to the production of machines and cranes.

The steel production company produced a total of 6.6 million tons of liquid steel during the reporting period. In the 2020-2021 period, this was 6.2 million tons and in 2019-2020, it was 6.8 million tons.



1.3 Sustainability strategy

Focus on the world, firmly embedded, big impact

Focus on the world, firmly embedded, big impact When determining the policy priorities for sustainability, Tata Steel considers which are the relevant topics with the greatest impact. In doing so, we closely monitor developments in the world around us, the interests of our stakeholders and the impact Tata Steel can have. In this section we take a closer look at the process of how we determine whether a sustainable goal is significant or not.

In the year under review, the following social developments are important to Tata Steel Nederland.

Concerns about impact

Tata Steel's operations management is subject to European and Dutch laws and regulations with regard to the environment. Internally, there are various systems and procedures that must guarantee compliance. Nevertheless, we have been approached by local residents and civic society organisations about our impact on the immediate living environment. The Roadmap Plus improvement programme is now being implemented with priority. This is a package of measures worth more than 300 million euros that aims to significantly improve local performance in areas such as dust, noise and bad odours. We have also intensified the dialogue with direct stakeholders in the Tata Steel community.

Climate change

Climate change necessitates drastic measures. Following the European Green Deal (2019) and the Climate Act (2020), the European Commission made a large number of proposals in its 'Fit for 55' package in the year under review. These must ensure that the climate goals are achieved. Tata Steel commits to the climate agreements. In September 2021, Tata Steel announced its intention to switch to Direct Reduced Iron (DRI) technology by 2030. This allows steel to be made on the basis of hydrogen. During the year under review, we noted that reducing greenhouse gas emissions is also increasingly prominent on the agenda of our customers.

Rising demand for steel

The rapid economic recovery after the Covid-19 pandemic created greater demand for steel than initially expected. As a precaution, many European steel companies had actually cut production during the pandemic. The combination of rapidly growing demand for steel and lagging production caused prices to soar and make 2021/2022 a profitable year. This marked an end to a period of tight margins. The financial space thus created opportunities for making Tata Steel Nederland more sustainable.

Materiality analysis

To gain insight into which topics determine our strategy and the content of our reports, we have carried out a so-called materiality analysis. To this end, we have mapped out the most important social issues for our company and our stakeholders. Two questions are central to this:

1. What are the significant/relevant topics for the different stakeholder groups?
2. Where does Tata Steel think the organisation can make an impact?

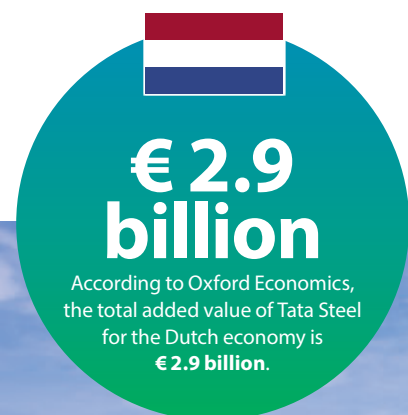
The first step was a desk research based on the materiality analysis of parent company Tata Steel. We also included trends and developments from the sector, as well as Tata Steel's existing sustainability strategy and outcomes of stakeholder discussions. This resulted in ten relevant themes (see box).

As a second step, the identified topics were evaluated and ranked by importance from Tata Steel's perspective. This was done in an internal stakeholder session where we asked participants to prioritise the themes based on four perspectives: frequency, size, legal impact and cost. The scores were then added together to arrive at a ranking. Given the great relevance of all these topics and the small differences in scores, we include all ten topics in this sustainability report. The results were subsequently submitted to the Board of Management and validated.

Resulting material themes

- Local Environment
- Carbon Reduction
- Health & Safety
- Quality & Innovation
- Profitability
- Responsible Sourcing
- Circularity
- Governance & Engagement
- Supporting Customers in sustainability
- Resilience/Equal opportunity

In order to report in line with the Global Reporting Initiative (GRI), Tata Steel has the ambition to perform a new materiality analysis next year in which we include the concept of double materiality, define the themes more clearly and also involve external stakeholders in the process.



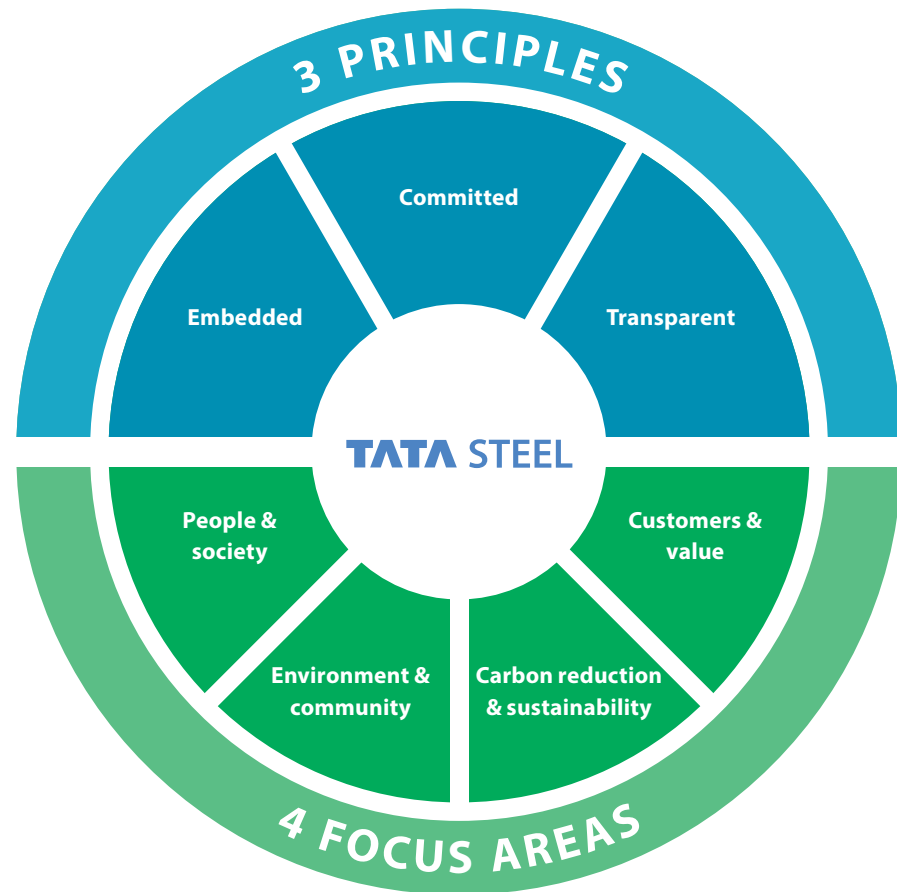
1.3 Sustainability strategy (continued)

Strategic framework

Two components are central to Tata Steel's sustainability strategy: Accountable (attributable) and Sustainable impact (effective).

The first component refers to our principles that sustainable development at Tata Steel must be embedded, committed and transparent.

The second component reflects our focus. This is based on the themes People & society, Environment & community, Carbon Reduction & sustainability and Customers & value.



Our sustainability principles

Embedded:

We embed our sustainable goals in our policy, management systems and communication. This makes everyone at Tata Steel, from top to bottom, responsible for sustainable success.

Committed:

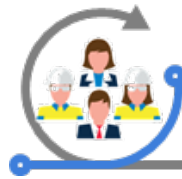
We encourage all stakeholders, throughout the supply chain, to become more and more committed to sustainability, just like us. We listen to their feedback and include it in our decision-making.

Transparent:

Science and facts form the basis of our decisions. We use standardised verifiable statistics and follow generally accepted standards, guidelines and indicators. We communicate so openly about our sustainable performance that third parties can also assess this.

Our four focus areas, linked to UN Sustainable Development Goals

These four focus areas are the topics we report on in the following chapters. The table below provides insight into how the defined material themes relate to these subjects and which KPIs and targets are associated with them.



People & society:

We are committed to the health, mental well-being and employability of all employees. Safety at work has the highest priority in this regard. We also create a working environment in which equal opportunities are offered. We invest in the training and development of all our colleagues, whether they are employed or otherwise affiliated with us.



Environment & community:

We work continuously to minimise the impact on the local living environment and the environment in general.

We are in dialogue with local residents, governments, companies and other organisations about developments on our site and in our community.

We participate in local partnerships, we support local initiatives and we involve our neighbours in our own activities as much as possible.



Carbon reduction & sustainability:

We recognise that climate change can only be prevented by large-scale reduction of greenhouse gases.

We support the goals of the UN Paris Climate Agreement and the Dutch climate goals and see it as our responsibility to contribute to the solution.

We are working hard to lower our CO₂ footprint.

We strive to use as few natural raw materials as possible and are committed to driving positive changes in the value chain.



Customers & value:

We work closely with our customers to use steel as efficiently as possible in their products and thus make the value chain more sustainable.

Long-term profitability is important to achieve our sustainable goals. We achieve this through customer loyalty, quality, new products and R&D.



1.4 Stakeholders

Tata Steel attaches great value to dialogue

At Tata Steel, we continuously seek dialogue with stakeholders. This is necessary because our ambitions and the route to achieve them require intensive coordination and cooperation. In that context, we have structural consultations with employees, customers, local residents and NGOs. Naturally, we are in close contact with national and regional (semi-public) organisations, such as the Province of North Holland, municipalities and environmental agencies. We also maintain contact with policy makers and politicians at European level. In our industry, we are affiliated with various consultation structures and partnerships (an overview of these can be found in Chapter 5).

Accessible and traceable

Tata Steel uses various media to be easily accessible and traceable for stakeholders, especially in the community. In addition to the website and our social media channels, we publish various newsletters. Since May 2022, we distribute the new door-to-door environment newspaper Staal & IJmond (circulation of 75,000) in the IJmond region three times a year. In this newspaper we report on, among other things, the progress of our measures for a cleaner environment, the hydrogen route and Tata Steel as an employer. Other newsletters include the digital newsletter RondonStaal for the IJmond and 'Tata Steel & Omgeving' for Wijk aan Zee.

Dialogue with local residents

During the year under review, we intensified our contact with local residents. Our goal is to listen to what is going on with our neighbours and to inform and involve them in developments on our site at the earliest possible stage. Themes that are discussed are quality of life and sustainability, but also employment and economic cooperation. In February 2022, we started 'Open Vizier', a series of live broadcasts in which CEO Hans van den Berg talks to local residents and other stakeholders. Anyone can follow these live Q&A broadcasts and ask questions.

In addition, we remain in contact with various organisations and authorities in the area. For example, a sounding board group has been set up, in which representatives of nature and environmental organisations, village and district councils and the business community in the IJmond come together to discuss the environmental measures from the Roadmap Plus with Tata Steel.

Employee representation

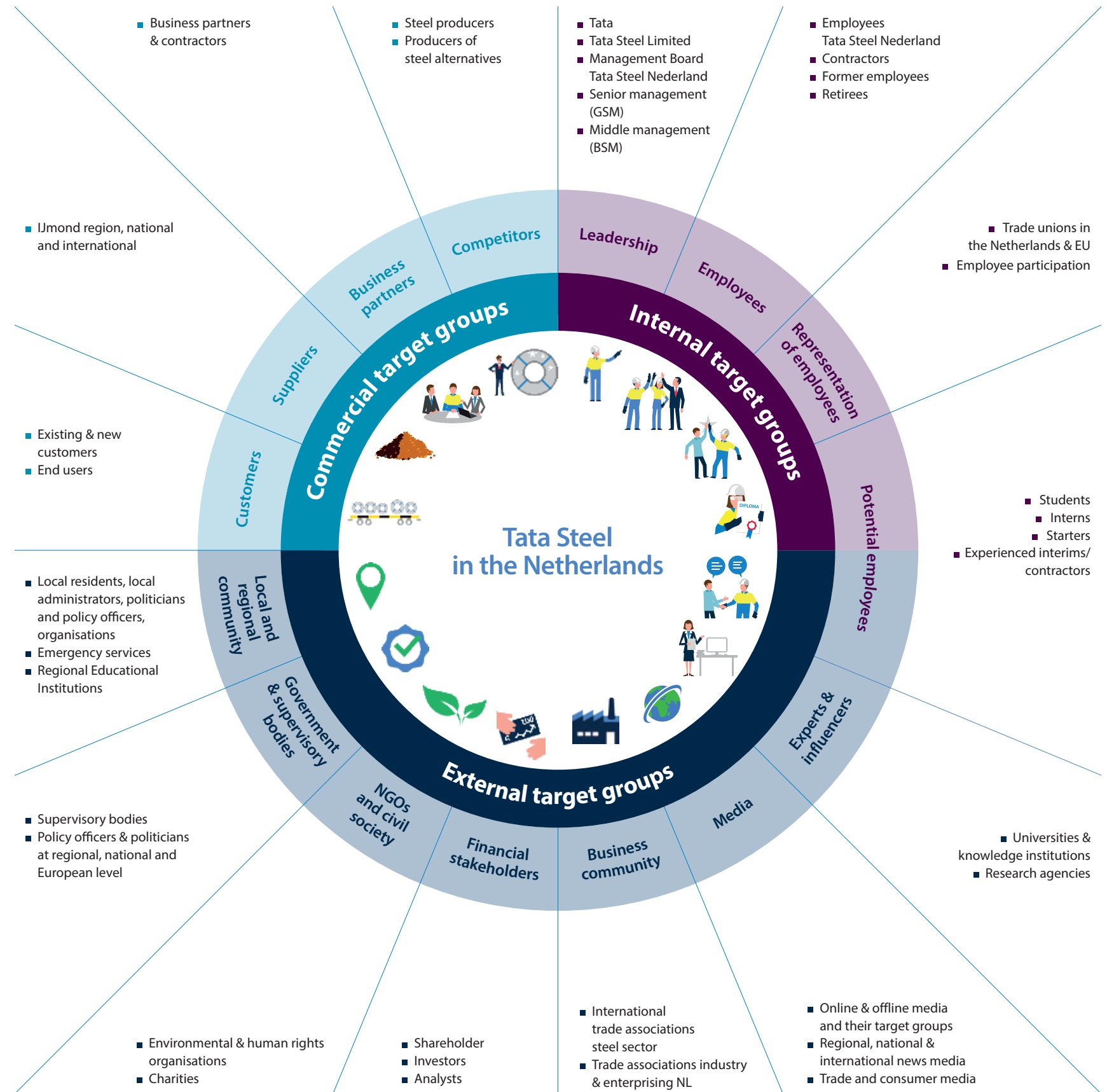
Tata Steel attaches importance to employee participation and is convinced that well-organised employee participation is in the interest of employees and the company.

At Tata Steel IJmuiden, works councils (a total of 6) have a role in the consultations within their own work unit. They delegate members to the Central Works Council (COR). Consultation also takes place in various committees of the COR, such as the IJmuiden Committee for IJmuiden-wide issues. Members of the works council also assist employees in individual matters.

There are regular consultations with unions about terms and conditions of employment. The collective agreement is also negotiated with them, which is usually concluded for one or two years. In it, Tata Steel and the unions make agreements about wage developments and other terms and conditions of employment. In April 2022, a negotiation result was reached for the IJmuiden Social Unit for the following year and a half.

Within Tata Steel Downstream Europe (DE), the interests of employees are also represented by separate works councils. In all cases, there is consultation between the Managing Director and the employee representation. All DE works councils are supported by the COR.

A central consultation at the level of Tata Steel Nederland has now been initiated



More sustainable with customers

We are in talks with our customers and are working closely together to make the value chain more sustainable. This concerns our processes and our products and how they can contribute to making their processes and products more sustainable.

1.5 Governance

For responsible and sustainable management and supervision

The Board of Directors is charged with the day-to-day management of Tata Steel Nederland. During the reporting period, this consisted of Hans van den Berg, CEO and chairman of the board, and Co van Dort, Financial Director. Tom Eussen has been appointed as the third board member after the reporting period, with the downstream Europe activities within the European Union, Switzerland, Turkey and the United States in his portfolio. The Board of Directors is responsible for the day-to-day management of Tata Steel Nederland and the policy pursued, including performance and results, as well as the sustainability strategy. The members of this Executive Board are appointed by the General Meeting of Shareholders (AGM).

The Board of Directors is supervised by the Supervisory Board (SB); it supervises how the board members fulfil their duties within the framework of the management of the company and the policy pursued. At least fifty percent of the Supervisory Board consists of independent members, including the member nominated by the works council. All members are non-executive. Each member has an equal vote. The Supervisory Board currently consists of one woman and three men. During the reporting period, the Supervisory Board consisted of T.V. Narendran (chairman), Marius Jonkhart, Leni Boeren and Henrik Adam.

The Supervisory Board has set up an Audit Committee, consisting of Marius Jonkhart (chairman) and Henrik Adam of the Supervisory Board. This committee prepares the decisions of the Supervisory Board regarding the integrity and quality of the financial reporting and the effectiveness of the internal risk management and control.

The members of the Supervisory Board are appointed by the AGM on the recommendation of the Board itself. The

works council has an enhanced right of recommendation for the appointment of one member. The Supervisory Board has drawn up a profile with regard to the required knowledge, diversity and independence of its members. The profile is leading in the selection and nomination of new members. The remuneration of the members of the Supervisory Board is determined by the AGM. The amount of the remuneration does not depend on the result of Tata Steel Nederland. The Supervisory Board evaluates and assesses its own performance and that of the members of the Executive Board every year. The Supervisory Board may be supervised by an external party.

Within the structure of Tata Steel companies, T.V. Narendran fulfils the role of CEO and Managing Director within Tata Steel Limited and Henrik Adam fulfils the role of Vice-President European Corporate Affairs within Tata Steel Limited.

The Executive Board and the Supervisory Board have both drawn up regulations for their functioning and the manner in which decisions are made. The regulations also specify that members will not participate in decision-making if there is a conflict of interest.

Supervision of sustainability

Sustainability is the ultimate responsibility of the Board of Directors within Tata Steel Nederland. The members share this responsibility as colleagues and are supported in this by the Sustainability Director, Annemarie Manger and her team. She reports directly to the Board of Directors.

Connect, change & care: basis of governance

Tata Steel focuses on the transition to clean, green and circular steel. The board is convinced that the entire organisation must move along in, and cooperate with this radical change. New, meaningful leadership is indispensable in this respect. That is why a new leadership programme was launched for senior management (top 100) at the end of the year under review. These managers learn how to align their leadership behaviour and style with our sustainable ambition, to motivate and stimulate employees in desired behaviour.

Tata Steel's three leadership principles are:

- We connect and collaborate
- We change and anticipate future
- We care about society and contribute

Tata Code of Conduct

Tata Steel embraces the five Tata Values that are shared by all Tata companies worldwide and that serve as a guideline for the expected behaviours and practices within the company:

Pioneering | Responsibility | Excellence | Unity | Integrity

These are laid down in the Tata Code of Conduct.

Tata Steel's purpose, values, vision, mission, strategy and core messages are communicated at all levels of the organisation through regular internal communications, senior management conferences and weekly CEO update meetings.

Board of Directors



Hans van den Berg (1962)
CEO and Chairman of the Board

Hans van den Berg started his career at Tata Steel (then Koninklijke Hoogovens) in 1990. Since then, he has held various positions at Research & Development, the Blast Furnaces, the BOF 2, the Cold Strip Rolling Mill and the Direct Sheet Plant. Hans holds a PhD in physics and completed his MBA at both Nijenrode University and Rochester University (NY).



Co van Dort (1961)
Financial Director

Co van Dort started his career at Tata Steel in 1988 and has since held various finance positions at the IJmuiden site, both at plant level and centrally. In June 2022, Co van Dort stepped down and retired. His successor, Martijn Plaum, will join the Board of Directors in September 2022.



Tom Eussen (1971)
Downstream Europe Director

Tom Eussen started at Koninklijke Hoogovens in 1996 and held various strategic, operational and general management positions. In recent years, he was responsible for Downstream Operations at Tata Steel Europe. Tom Eussen graduated in industrial engineering from the University of Twente, and obtained his EMBA at IMD in Switzerland.

Supervisory Board



T.V. Narendran (1965)
Chairman of the Supervisory Board since 2021

Other positions: CEO and Managing Director of Tata Steel Limited (since 2013), Member of the Executive Committee and Board of Directors of World Steel Association.



Marius Jonkhart (1950)
Member of the Supervisory Board since 2006

Other positions: Chairman of the Board of Governors of the Netherlands Economic Institute (since 2021).



Leni Boeren (1963)
Member of the Supervisory Board since 2014

Other positions: Member of the Supervisory Board of NIBC, Member of the Supervisory Board of Air France-KLM, Chairman of the Supervisory Board of Ohpen, Member of the Advisory Board of Keyser & Mackay, Member of the Authority for the Financial Markets, Member of the board of Stichting Administratiekantoor Koninklijke Brill.



Henrik Adam (1964)
Member of the Supervisory Board since 2019

Other positions: Vice President European Corporate Affairs at Tata Steel Limited (since 2022), Member of the Advisory Board of Keyser & Mackay.

2

ENVIRONMENT AND COMMUNITY



2.1 Impact on the immediate living environment

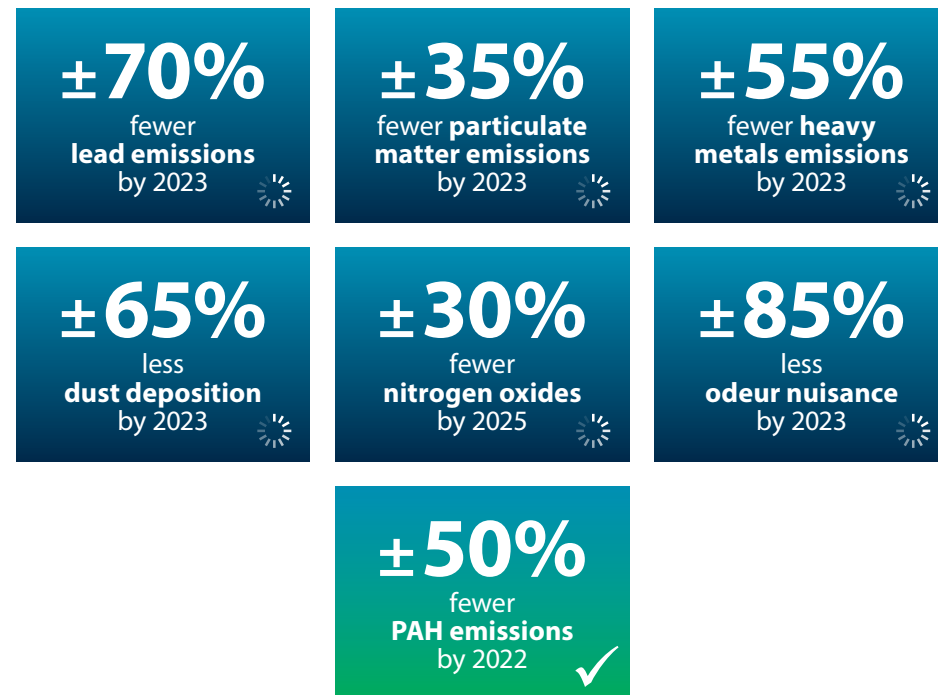
Minimum burden thanks to targeted measures

Our steel company in IJmuiden occupies an important position in the region, due to the size of our site, the employment opportunities and the regional economy in general. We are aware that our activities burden the living environment and work continuously to minimise this burden. In the meantime, we remain in dialogue with local residents, governments, companies and other organisations about developments on our site and in our community.

Additional measures for noticeable improvements

Steelmaking has been linked to IJmond for over a century and we want to continue this in a future-proof manner. In our organisation, we have various systems and procedures that ensure our operations comply with European and Dutch laws and regulations. Despite the fact that Tata Steel complies with laws and regulations with regard to the environment, we have been approached by local residents and civic society organisations about our impact on the immediate living environment.

At the end of 2020, we launched the Roadmap Plus improvement programme. With this, we are taking an important step to reduce emissions and perceived nuisance. In this improvement programme worth more than 300 million euros, we are building on previously planned improvements and taking additional measures at an accelerated pace. The projects of this improvement programme will be completed by 2023, with the exception of the DeNOx installation of the Pelletising plant, which is expected to be commissioned in 2025.



Measures realised in 2021/2022

Within the Roadmap Plus improvement programme, various measures have been implemented in 2021/2022 to further reduce the emissions of PAHs (Polycyclic Aromatic Hydrocarbons). On 1 March 2022, a new environmental installation was commissioned at the Cold Strip Rolling Mill and virtually no PAHs are emitted during the annealing of rolls of steel. Various adjustments have also been made in the production process of taphole clay at the Blast furnaces and in the production process at Coking and Gas Plant 2. We have made adjustments to the flue gas cleaning installation at the Sintering plant. As a result, emissions of PAHs have decreased even further. We will continue this in the coming period with new measurements by independent measurement consultancies.

Initial measurements by independent measurement consultancies show that the intended 50% reduction in PAH emissions compared to 2019 has been achieved.

During the year under review, we completed various projects that further reduce our emissions. New, covered slag pits, for example, now reduce the dispersion of dust when cooling converter slag. Measures have been taken at Coking and Gas Plant 2 and when heating steel pans in the Steel Plant to reduce odour emissions. This puts us well on the way to the intended 85% odour impact reduction we have in mind for next year. We will need to carry out more measurements to ensure this improvement continues. To that end, we will draw up a measuring programme.

New soundproofing measures have also been taken on trains and conveyor belts. Unfortunately, new silencers on the extraction systems at our steel plant are not yet having the desired effect. We will continue until we have also sufficiently muted this sound source.



Commissioning of environmental installation at Cold Strip Rolling Mill 2.



Less dust dispersion thanks to covered slag pits.

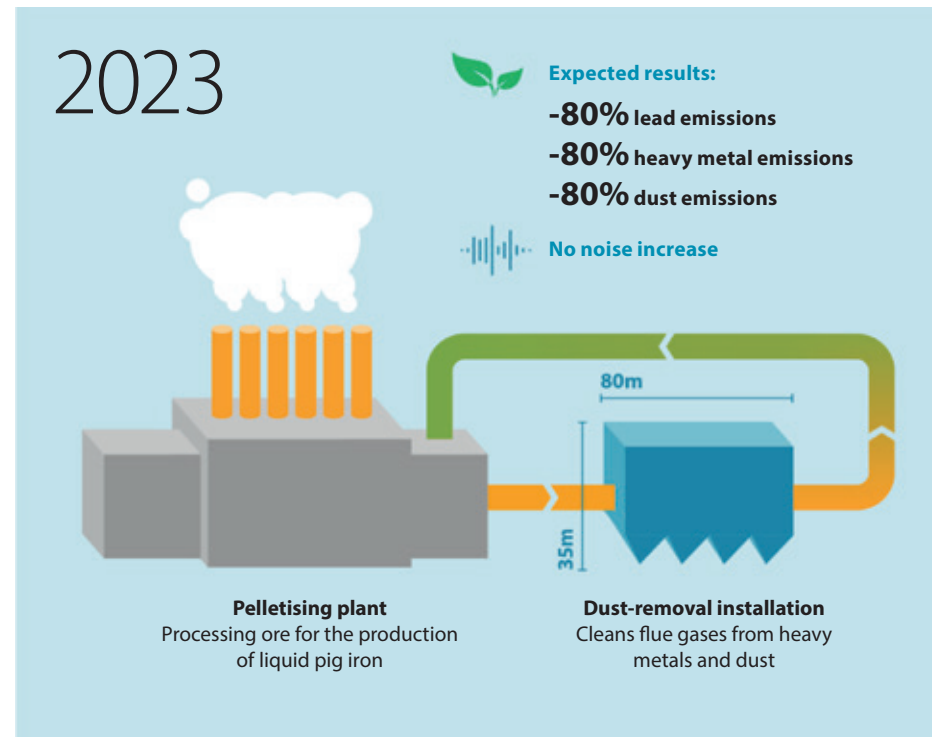
2.1 Planned measures 2023/2025

Impact on the immediate living environment (continued)

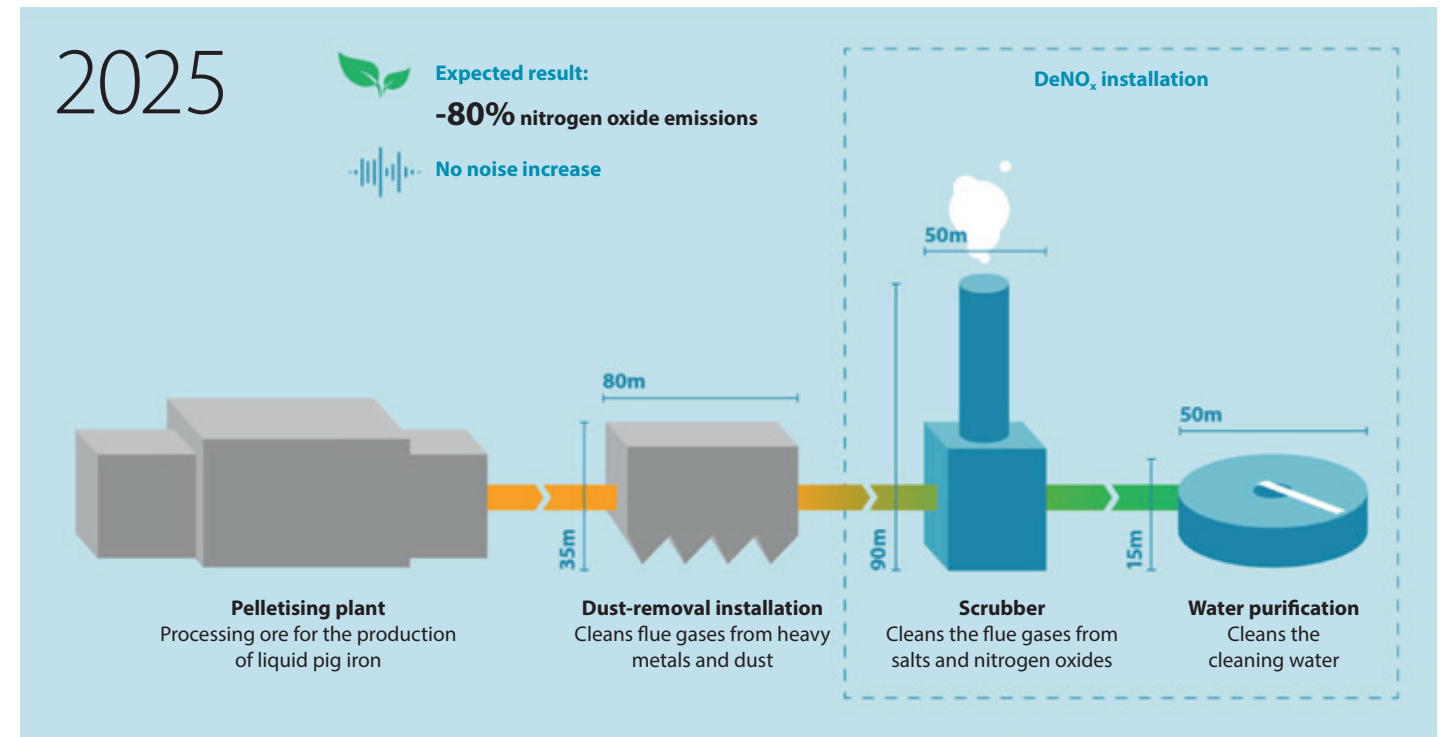
Pelletising plant

In 2021 we took the decision to accelerate the construction of a dust-removal plant at the Pelletising plant. With the planned completion in 2023, the emissions of dust, lead and heavy metals at this plant are expected to be reduced by approximately 80%.

In 2025, a new environmental installation will be linked to this, which will purify the remaining gases from nitrogen oxides (expected efficiency of 80%). This installation is scheduled to be completed in 2025. For this, we use a new technology that has not yet been applied on this scale elsewhere in the steel industry.



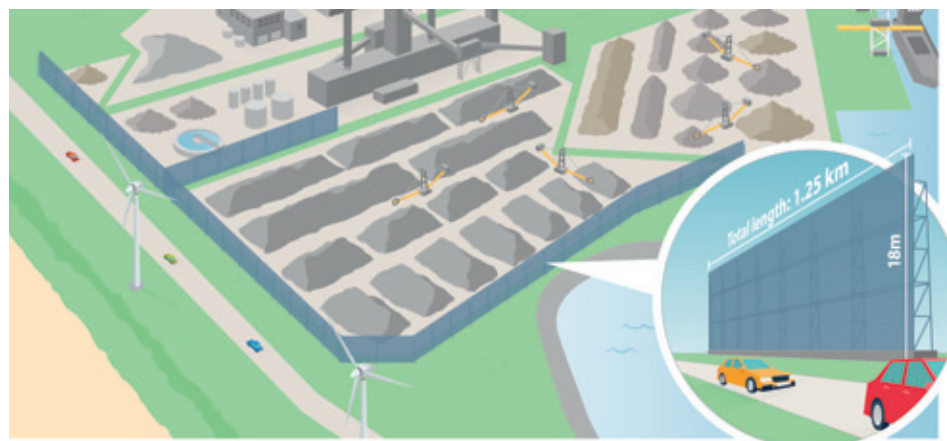
Dust-removal plant to be realised at the Pelletising plant in 2023.



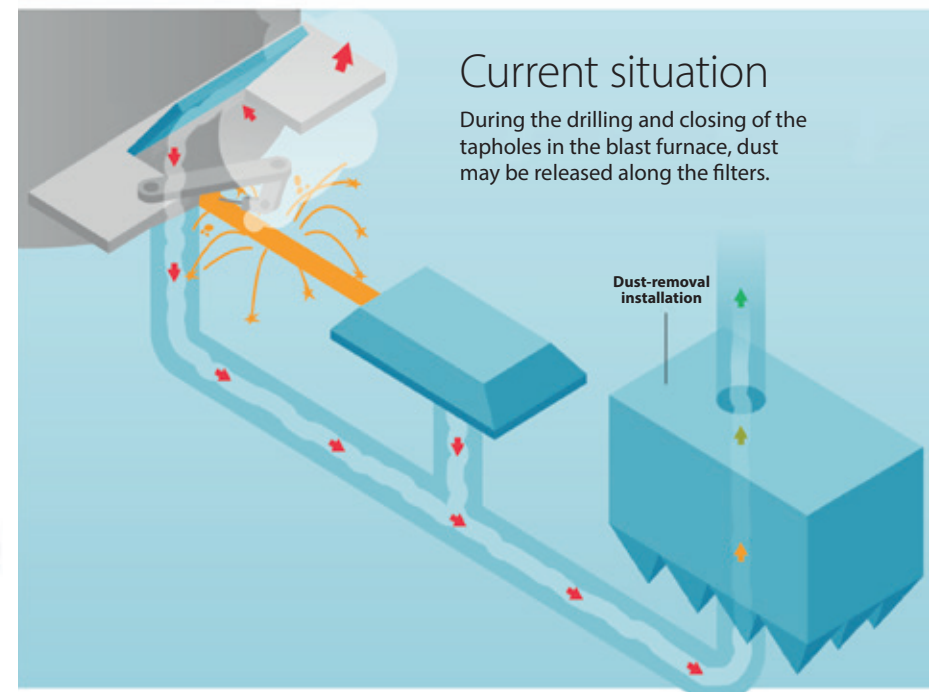
DeNO_x installation to be realised at the Pelletising plant in 2025.

Raw material storage and blast furnaces

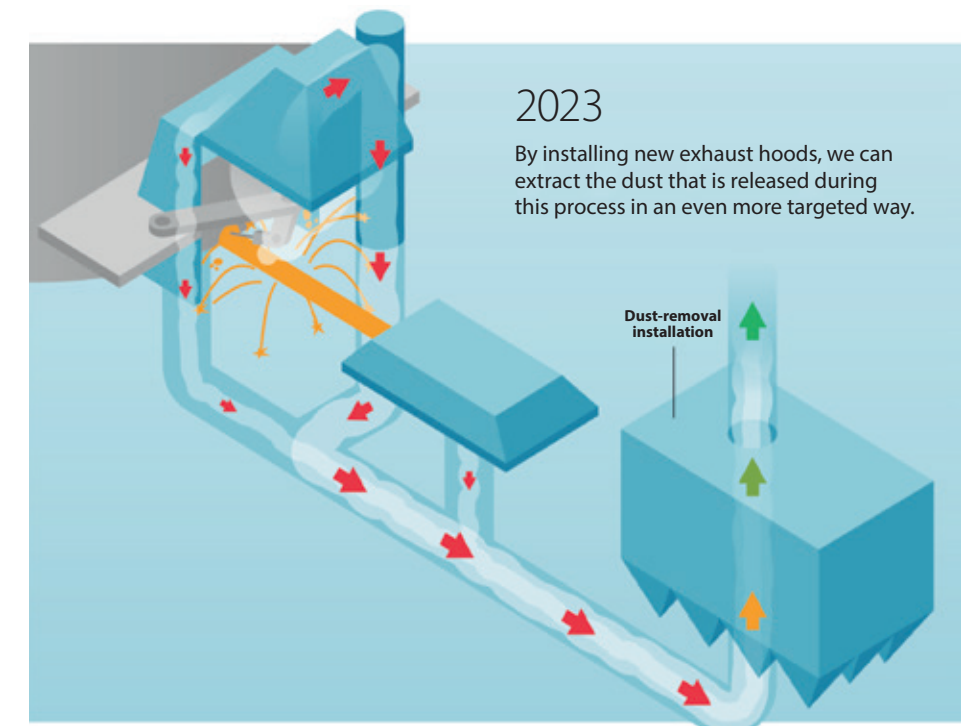
We are also tackling dust emissions at the raw material storages, the bunkers of the Blast furnaces and the conveyor belts there. Our plans are to start with the construction of a wind screen around the storage areas of more than 18 metres high and a kilometre long after the summer of 2022. We expect this to reduce dust emissions because less wind means less chance of blowing dust. We also expect to be able to install the first extra exhaust hood at Blast furnace 7 this year. This is intended to reduce roof emissions. Five additional exhaust hoods for the two blast furnaces will follow in 2023.



Wind screen to be realised around the raw material storage facilities in 2022.



Current situation at blast furnace tapholes.



Exhaust hoods to be realised at the blast furnace tapping locations in 2023.

2.2 Monitoring and measuring

Measuring results is a high priority

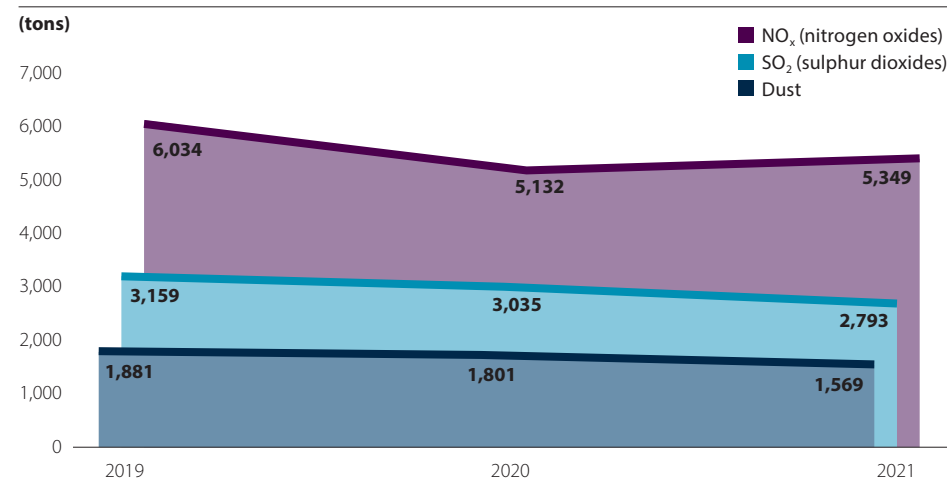
We want to inform our stakeholders as clearly and proactively as possible about the results achieved. Monitoring and measuring emissions is a complex process in which it is sometimes not possible to measure directly at a source. In such cases, we use calculation

models to make an estimate. External factors, such as the weather, can also influence measurements. By measuring, based on the best possible and most reliable techniques and methods, we try to map our impact as accurately as possible.

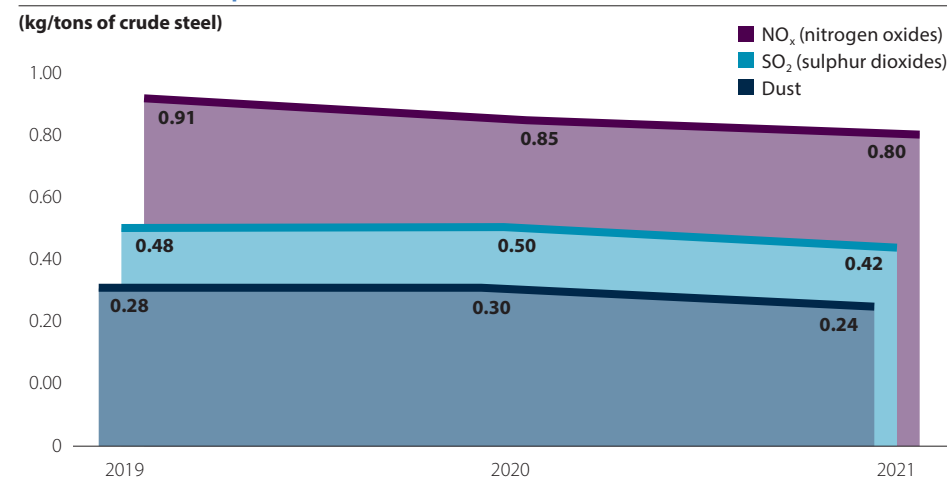
TSIJ emission results

The emissions of dust, nitrogen oxides and sulphur dioxide have followed a declining trend in recent years. The same applies to emissions per tonne of crude steel.

Tata Steel IJmuiden Emissions



Tata Steel IJmuiden Specific Emissions



How Tata Steel measures emissions



Dust:

To measure dust that precipitates in the immediate living environment, we have dust samples taken at various locations. This is done in cooperation with TNO. The origin of any dust found can be determined by means of analyses, giving a clear picture of the proportion of dust in the environmental samples that comes from Tata Steel. By continuing these analyses in the coming years, we will keep an up-to-date picture of dust dispersion and we can continue to make targeted efforts to reduce this as much as possible.

Odour:

To calculate odour impact, we have an externally qualified agency carry out measurements at the sources of odour emissions on the site. These measurements serve as input for a dispersion model that is also used to report to Omgevingsdienst Noordzeekanaalgebied (Environmental Agency) (competent authority). New odour emission measurements are performed every year, which are calculated using this dispersion model. The results from these measurements are then compared with the baseline situation, which has been compiled on the basis of data for the past ten years.

Heavy metals, particulate matter and nitrogen oxides:

Tata Steel reports these emissions annually in the digital annual environmental report (eMJV), which is checked and approved by the Environment Agency. Every year, we use the most current eMJV values to monitor the change in emissions of heavy metals, particulate matter and nitrogen oxides compared to the baseline situation, the eMJV from 2019.

More information

We report on the progress of the implementation of the Roadmap Plus improvement programme via our website (in Dutch). In addition, a Roadmap Plus Progress Report is published annually; this will soon be available at <https://omgeving.tatasteel.nl>

<https://omgeving.tatasteel.nl/roadmap-plus/voortgangrapport>

2.3 External Study

Concerns about impact

External study

In 2021, Dutch Institute of Public Health (RIVM) published the results of two studies related to public health in the IJmond region. In April, this concerned an interim report relating to peak values of particulate matter levels detected around our company premises, which were higher than in a relatively untouched nature reserve. The number of GP visits for certain acute health problems also turned out to be higher than elsewhere. However, the RIVM was unable to link both results to Tata Steel's activities and proposed new studies. In September, the RIVM concluded in a second report that there was an increased content of lead and PAHs in deposited dust. The third RIVM report, published in January 2022, concerned the origin of substances sampled in our immediate environment.

At the end of April 2021, the Dutch Safety Board announced that it would start studies into the effect of industrial emissions on the living environment and health. It considers three case studies from the Netherlands. Tata Steel IJmuiden, with Harsco, is one of the three case studies.

In January 2022, the Public Prosecution Service launched a criminal investigation into possible intentional air pollution by Tata Steel and a third party, with risks to people's health. This followed a report on behalf of approximately 800 parties in May 2021.

Concerns about our impact

It goes without saying that the aforementioned studies mean that residents and employees are more concerned about our impact.

The Roadmap Plus is an important step forward in Tata Steel's ambition to reduce emissions and nuisance experienced by local residents. We are building on the improvements we have made since the start of the Roadmap 2030 in 2019. We are taking additional measures and are making extra investments, while accelerating the environmental projects from the Roadmap 2030 as much as possible. Our priority is on the measures that have the greatest possible positive effect on the living environment, such as dust, odour and noise. Based on data and estimates, the plan provides clarity about the impact of the measures on improving the living environment.

The strategic decision of September 2021 is also radical, whereby we want to switch to Direct Reduced Iron (DRI) technology in

2030 to make steel based on hydrogen. Our intention for 2030 is to replace a blast furnace and Coking and Gas Plant 2 with new plants. This results in a substantial improvement of the immediate living environment and an expected reduction of our CO₂ emissions by 35-40%.

In order to address concerns among residents and employees – who often also live nearby – we have intensified communication with the community. Employees from Wijk aan Zee received many questions about nuisance from their community and needed more information about our environmental measures. They have been updated several times by the General Manager and the HSSE Director.

To map the nuisance experienced in Wijk aan Zee as accurately as possible, we initiated an online residents' panel in 2019. This enables residents from Wijk aan Zee to share experiences and other feedback with us. In the year under review, the residents' panel consisted of 35 participants.

In addition, we regularly distributed RondomStaal, a digital newsletter with relevant Tata Steel news for the community.

We have recently (May 2022) started distributing Staal & IJmond in a circulation of 75,000. In this local newspaper we inform residents in the IJmond about various matters and developments at Tata Steel.

In February, during a live web broadcast, Hans van den Berg talked to local residents and other interested parties about the impact of the company on its surroundings.

The latest developments can also be followed via our social media channels Facebook Tata Steel in the Netherlands and Twitter Tata Steel in the Netherlands

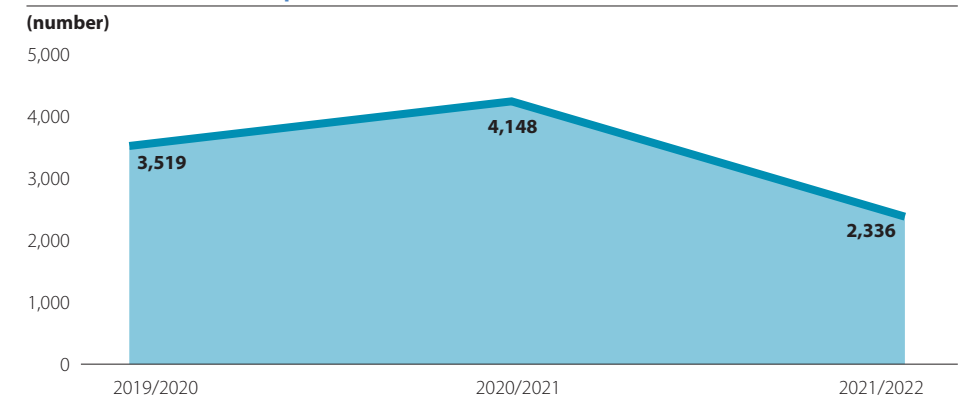


First edition of Staal & IJmond.

Complaints from the community

Against the background of the studies described above, the number of complaints received by Tata Steel from the community fell by almost half in 2021. While we received 4,184 complaints in 2020, in 2021 there was a decrease to 2,336 reports. The complaints mainly relate to odours, dust and noise.

Environment-related complaints Tata Steel IJmuiden



Hans van den Berg in conversation with local residents during live web broadcast.

Bram Nugteren, Environmental Manager

‘We’ve thrown open the doors’



‘Environmental management has gained in importance for Tata Steel IJmuiden in a short period of time. This has to do with the growing resistance to which we paid less attention for a long time. We are now very open about what we do and what we strive for. We’ve opened our doors, literally, with ‘Tata Steel in de Buurt’, our information office at Zwaanstraat in Wijk aan Zee’, says Bram Nugteren.

“Depending on what the corona measures allowed, our information office was open to visitors as much as possible last year. Once we have our staff in order, we want to open on all working days, and on Thursday evenings and Saturday mornings. We’ll see if we get more traffic then; at the moment, it’s an average of two a day. Sometimes someone comes with a complaint, or they just want an explanation about our environmental measures. In 2022, we can also show more information about the switch to DRI technology, by 2030, and to the hydrogen route.”

“Personally, I don’t really like my job title of ‘Environmental Manager’. We want to start a dialogue about what is going on in the immediate vicinity of our site, provide answers to questions and we want to know even better what people experience and expect from us. All the feedback we receive is converted into measures. As the person responsible for the Roadmap Plus improvement programme, I especially want us to achieve real results and for people to notice this. Fortunately, that’s happening now; we’ve been able to significantly reduce the nuisance from our site; no more graphite and less dust, odours and noise.”



Wijk aan Zee information office.

“Unlike in the past, I think we’re more empathetic in our contact with the community. This means we look for a solution, instead of first checking whether the problem is actually caused by us.”



Bram Nugteren in conversation with visitor information office.

2.4 Sustainable relationship with the community

Cooperation and supporting local initiatives

Tata Steel wants to maintain a good and lasting relationship with the community. That is why we support initiatives that positively influence the well-being of the community, we participate in local partnerships and involve the local and business communities in Tata Steel initiatives.

Future Generations

Through the 'Future Generations' programme, Tata Steel supports local initiatives in the IJmond in the field of sports, education and culture. This way, we make a positive contribution to economic and social well-being in the community. These contributions are of a financial nature and are assessed by a committee of Tata Steel employees and external stakeholders from the region. In addition, we support initiatives with the deployment of people (time), technical resources or expertise.



Founder's Day

Within Tata Group, 3 March is Founder's Day: the birthday of founder Jamsetji Nusserwanji Tata. On this day, activities for a good cause take place throughout the Tata Group. This time, the employees of Tata Steel Nederland collected 15,792.70 euros for the Children's Burn Centre in Beverwijk.



Telstar

Tata Steel supports Telstar football club in IJmuiden. During the year under review, we extended our cooperation with this professional club. Part of this cooperation is support for the 'Telstar thuis in de wijk' social programme and the youth project 'Playing for success'. In this project, children with learning disabilities are coached towards a healthy lifestyle. Various football clinics are also organised for youngsters in the IJmond.



Green community

In the winter months, at the initiative of a resident of Wijk aan Zee, Tata Steel worked on restoring the green strip from Zeestraat to Wijk aan Zee. After elms had to be cut down due to elm disease, space was created for the planting of new trees and shrubs, which help restore the original biodiversity. In addition to planting oak, beech, birch, elderberry and hawthorn, natural ramparts are created for birds, insects and small mammals. By putting up nesting boxes and bat boxes, the green strip should become even more attractive for the fauna present.



Remembrance Day

Due to Covid-19, the annual Remembrance Day took place on 4 May 2021, but without an audience. Managing director Hans van den Berg and works council chairman Gerrit Idema were present. In memory of former Hoogovens employee and resistance fighter Jan Brasser, a plaque was unveiled at the Hoogoven Monument in the presence of a few relatives, including his daughter. This event can still be watched [online](#).



Pandemic limits options

In the year under review, the Covid 19 pandemic had an effect on the implementation of the Community Partnership Programme. Many activities were cancelled or continued on a smaller scale. To compensate, we organised so-called online 'Burentours' where people could visit our site virtually and see the production process.

Walking Challenge

In the spring of 2021, about 100 Tata Steel colleagues took part in the Walking Challenge – to stay fit. Because they have achieved the goal of 15 million steps, 1,000 euros has been made available for youngsters in Wijk aan Zee. The donation will benefit sporting activities through the Village Plan for welfare, care and sport.

2.4 Sustainable relationship with the community (continued)

Tata Steel Chess Tournament

The best-known Tata Steel-backed initiative in the region is the Tata Steel Chess Tournament (TSC). This chess tournament, organised in the first month of every year, has a long history. What once started as a tournament for steel mill workers has grown into a renowned international tournament that is a fixture in both grandmasters' and amateurs' diaries. The combined Dutch Olympic Committee and Sports Federation, NOC*NSF, has qualified the event as an elite sports event. The 84th edition was held in 2022.

Chess as a sport fits perfectly with the way we do business. In both cases, it is all about thinking strategically and finding creative solutions for complex issues. In addition, the sport of chess connects people from all over

the world, which is now more important than ever. Through #ChessConnects, Tata Steel organises various projects together with its partners to get people to connect around chess, with a special focus on connecting young people. A study shows that children and young people who play chess can concentrate better and perform better when it comes to logical thinking, problem solving, arithmetic skills and spatial awareness.

During the usually quiet winter months, the tournament draws chess enthusiasts to Wijk aan Zee. It is a boost for the local economy, with a cosy chess atmosphere that takes over the coastal village during the tournament. In editions before the Covid 19 pandemic, many chess players and chess enthusiasts were welcomed to Wijk aan Zee and hundreds of

amateur chess players played their matches alongside the chess grandmasters. The tournament format was changed in 2021 and 2022, whereby only the chess grandmasters entered into an 'over the board' (face2face) competition. Alongside that, there was a broad online offering. All grandmaster matches were live streamed, which attracted 6.3 million unique online visitors from across the world. We also organised an online Chess Festival for children and families that welcomed 10,000 online visitors. A total of 480 children played the traditional simultaneous chess match for youngsters online.



In January 2022, grandmaster Magnus Carlsen won the Tata Steel Chess Tournament for the 8th time.

Techport

Techport is committed to more, better trained engineers and more innovation in the manufacturing and maintenance industries. Tata Steel is one of the founders of this organisation. Since 2013, a network of more than 60 educational institutions, businesses and governments in the Amsterdam Metropolitan Area has been formed under the name of Techport. Parties know where to find each other for cooperation and knowledge sharing. The core of this network is located in the IJmond, with the municipality of Velsen and the Province of North Holland as important partners.

Techport operates on the basis of four field perspectives: choosing, learning, working and innovating.

The first perspective – choosing technology – is aimed at making young people enthusiastic about technology. A major driver is Stichting Technochallenge (largely from Tata Steel), a foundation that develops many activities in cooperation with primary schools, secondary schools and training funds.

The second perspective – learning for technical professions of the future – contributes to a better match between education and practice. In close cooperation with the business community, it ensures that students acquire the knowledge and skills the business community needs.

For the older, already active target group, Techport is committed to high quality retraining and refresher training opportunities; this is the

third perspective. Finally, to promote innovation – this is the fourth perspective – Techport has set up the Fieldlab Smart Maintenance Techport. This is a pilot plant for innovations with the aim of preparing new ideas for market introduction.

At the beginning of 2022, Techport will launch the Techport Innovation Center. In 2023, this new centre will be built next to the Tata Steel Academy. This meeting centre for tomorrow's engineers, businesses, education and government will be the place to be for innovations in the manufacturing industry.



Het Palenhuis

In September 2021, the Het Palenhuis art project was unveiled in the Sluisbuurt in Amsterdam. Artist Piet van Wijk collaborated with Tata Steel to realise his artwork, designed in weathering steel. With this art project, the artist visualises something that normally remains invisible to the naked eye; the pile foundation of buildings and houses. Tata Steel was intensively involved during the realisation and donated the weathering steel tubes that are made of a steel grade that acquires a dense rust-resistant layer over time. This means there's no need to paint or galvanise the structure: the steel requires little maintenance, is durable, environmentally friendly and has a natural appearance.

3 CARBON REDUCTION & SUSTAINABILITY



3.1 Current CO₂ footprint

Taking responsibility in solving the climate problem

Tata Steel Nederland recognises that further global warming can only be prevented by a large-scale reduction of CO₂ emissions. As the largest industrial emitter in the Netherlands, we see it as our responsibility to contribute to the solution. We aim to produce steel CO₂-neutral by 2045 and to have reduced CO₂ emissions by 35-40% by 2030. New technology and the emergence of hydrogen play a crucial role in this.

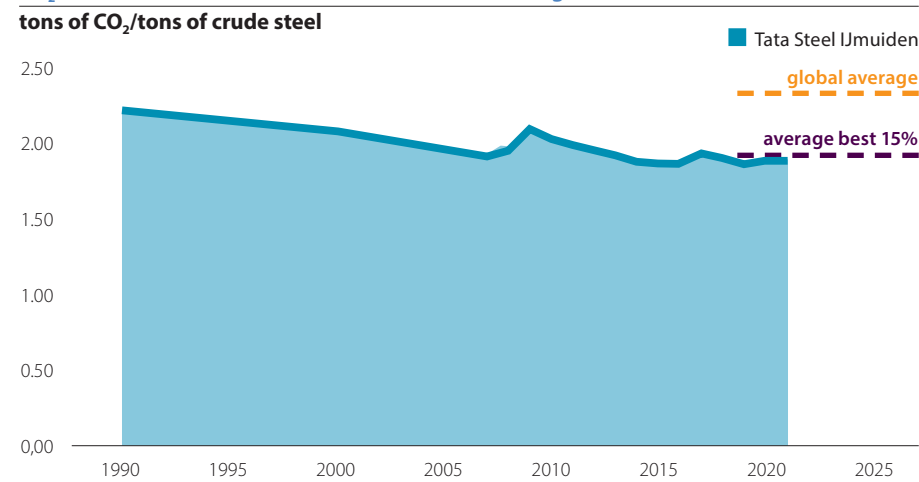
In 2022, Tata Steel in IJmuiden will be one of the most (cost) efficient steel plants in the world. According to the World Steel Association, Tata Steel Nederland is the number two worldwide in the field of CO₂ efficiency.

With an ambitious energy-efficient programme that has been running since 1990, Tata Steel has reduced the consumption of gas and electricity in its production processes by 30% per tonne of steel. At the same time, various projects were carried out to improve the blast furnace process and to increase the use of scrap in the Steel plant.

As a result, Tata Steel will need 8% less pig iron in 2021 to make one ton of steel (compared to 1990). This is important because approximately 90% of our direct CO₂ emissions are linked to the production of pig iron. With all these projects and programmes, Tata Steel IJmuiden has reduced CO₂ intensity per tonne of steel by 15% since 1990.

We realise this is not enough. A radical overhaul of the production process is needed to make steel production more sustainable.

CO₂ emissions - World Steel Association benchmarking



3.1 Current CO₂ footprint (continued)

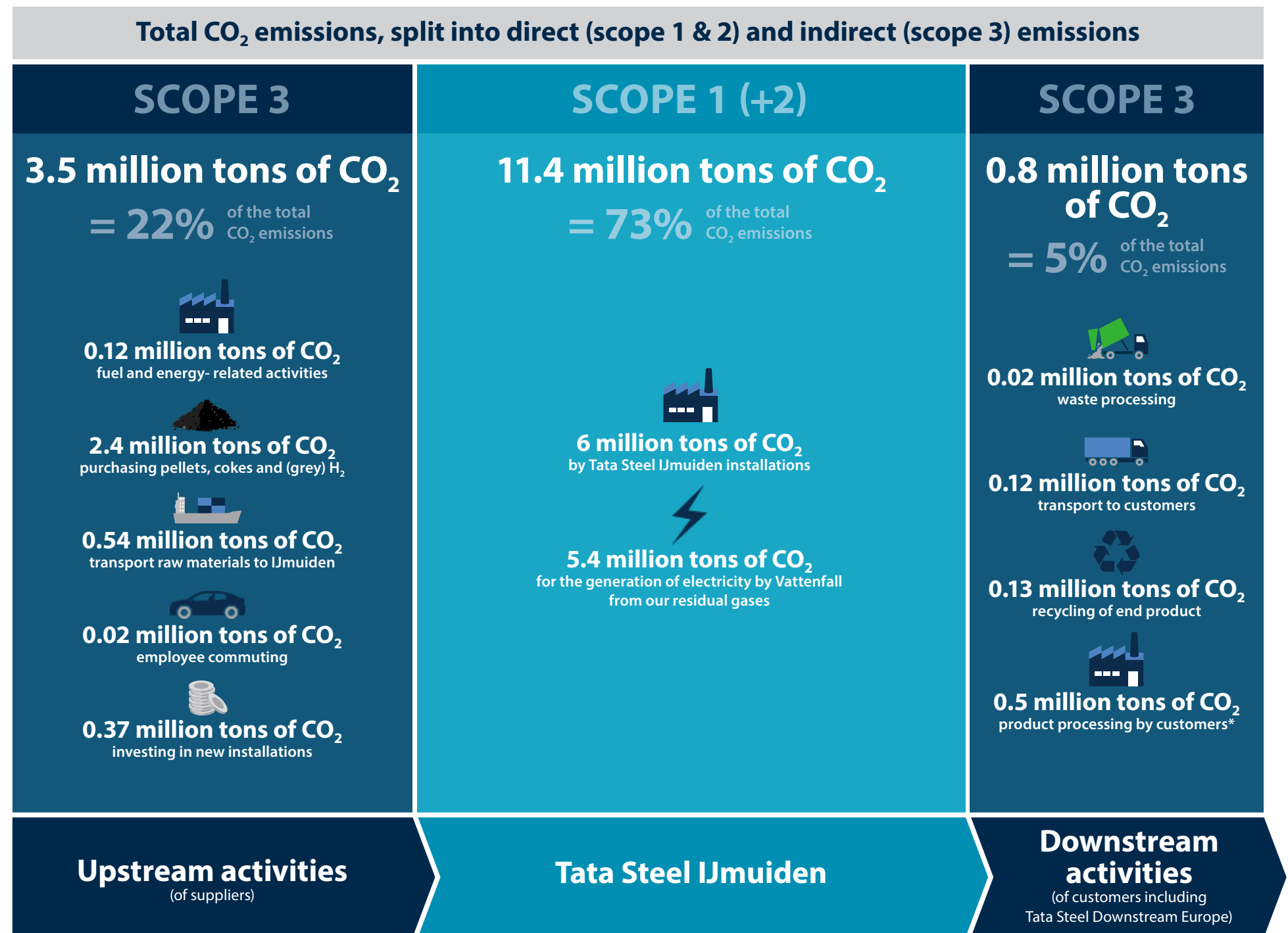
Current CO₂ emissions

Tata Steel Nederland is responsible for 8% of CO₂ emissions in the Netherlands. That is about 24% of all emissions in the Dutch industrial sector. That gives us a great responsibility to reduce our emissions as quickly and as much as possible. To measure and manage CO₂ emissions, we use the guidelines of the GHG protocol. This makes it clear that the vast majority (73%) of our CO₂ emissions are generated by our production processes at the IJmuiden site. Direct CO₂ emissions of the integrated steel plant in IJmuiden is 11.4 million tons of CO₂. Of this, 5.4 million tons of CO₂ is generated by the nearby Vattenfall power stations. We prefer to include the emissions from electricity generation that the Green House Gas (GHG) protocol classifies under scope 2 as part of scope 1. This way we prevent a distorted picture of the CO₂ footprint. Vattenfall uses the residual gases from our blast furnaces to generate electricity, which we then use in our production processes. The oxygen and nitrogen we purchase from Linde is also made with electricity from the Vattenfall power stations. That is why we also include these released CO₂ emissions in scope 1.

Scope 3 for the upstream activities includes 0.5 million tons of CO₂ for the supply of coal and ores to IJmuiden and 2.4 million tons of CO₂ for the purchase of pellets, among other things. Tata Steel produces and buys pellets for the production of steel in IJmuiden. These 2.4 million tons of CO₂ include not only the direct emissions from our raw material suppliers, but also, for example, the methane emissions released in coal mines. An indirect emission of 0.12 million tons of CO₂ has been recorded for the extraction, transport and conversion of fuel and energy that our suppliers need for their activities.

A problem recognised by the GHG protocol in calculating indirect emissions is that this is done on the basis of assumptions. Tata Steel is taking steps to make this more accurate by requesting data from specialised agencies and from our raw material suppliers themselves. To provide insight into the CO₂ emissions for the transport of our products to customers, the processing of our product by customers and the recycling of the end product, we now use calculated values. The total indirect emissions (scope 3) for our customers' activities are 0.8 million tons of CO₂. Where it is common for customers to ask Tata Steel about CO₂ emissions during the production of steel, we want to ask our customers about the emissions in their production process when processing our product. This way, we want to get an increasingly accurate picture of the actual CO₂ emissions.

In the overview we do not include the CO₂ emissions that arise from the use of the end product. This has to do with the fact that our steel is processed into countless different products by customers. In addition, unlike the use of diesel, for example, the use of steel does not generate any emissions. Lastly, for the recycling of steel, we have included an estimated value for the emissions released during the demolition or dismantling, sorting and subsequent transport of scrap to our site. One of the great advantages of steel is that it can be recycled easily and without loss of quality. It is our ambition to include the direct and indirect emissions of Tata Steel Downstream Europe in this overview in the next sustainability report.



3.2 Reorientation of climate strategy

Radical change of course for the climate

At the end of March 2021, Tata Steel presented its plans for large-scale capture and storage of CO₂. Until sufficient green hydrogen became available, Tata Steel wanted to use this CCS (Carbon Capture and Storage) route for an accelerated reduction of its CO₂ emissions. Special installations were to be built at the Blast furnaces for the capture of CO₂, which could then be stored in depleted gas fields under the North Sea. Given our location by the sea, CCS seemed like a desirable interim solution. In the longer term, if there was going to be enough green hydrogen, we were going to switch to hydrogen and start steel production in 2050 that is CO₂ neutral.

In the summer of 2021, the European Commission made a large number of new proposals in its 'Fit for 55' Package to ensure that CO₂ emissions of the European Union must be 55% lower in 2030 than in 1990. In the meantime, market surveys have shown that more and more of our customers are interested in green steel and are setting ambitious targets for CO₂ emissions. Not only in making their products, but also in the supply chain.

About a quarter of our customers indicated they are interested in purchasing CO₂-neutral steel by 2030. This percentage is expected

to rise to 80% in 2045 and will reach 100% in 2050. Two major customers have announced they will only buy 100% CO₂-neutral steel from 2030. In the meantime, the publication of various studies has resulted in growing concern among local residents about our impact on the local living environment (see Chapter 2).

While society attached an increasingly broader and more urgent importance to combating climate change and making the steel industry more sustainable, we saw social support for the intermediate step with CCS and keeping Coking and Gas Plant 2 open diminish.

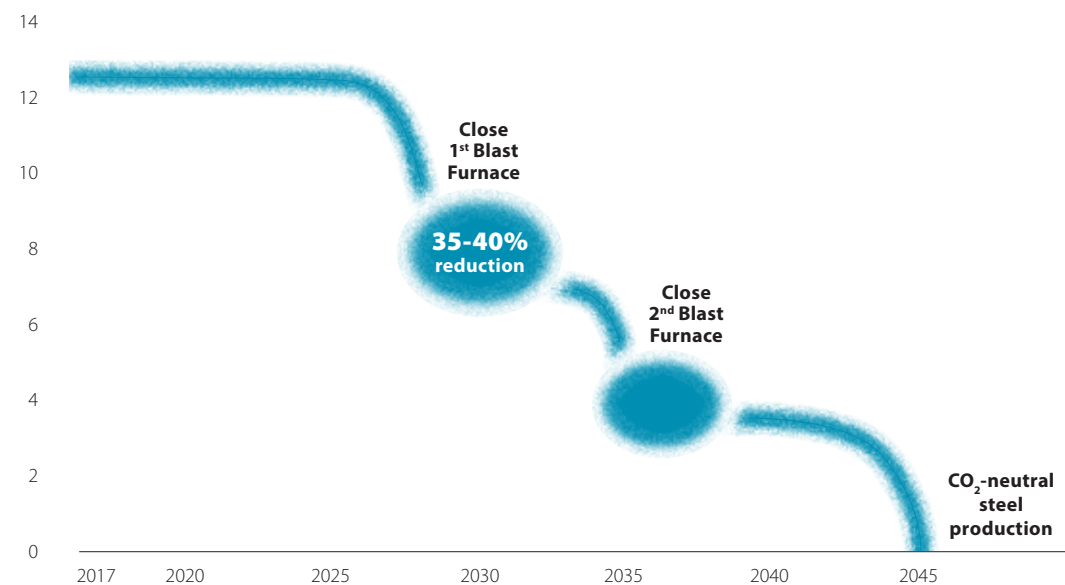
The trade union FNV pressed for further studies into possibilities to accelerate the transition to cleaner steel production. That is why in July 2021, we jointly decided to have the Roland Berger office conduct a study into the latest possibilities. In particular, we asked them to study the opportunities (and risks) of the aforementioned CCS route and the DRI (Direct Reduced Iron) technique. The conclusion of the study was that both technologies are suitable for achieving the CO₂ reduction targets. They are at a sufficient stage of maturity for Tata Steel's quality requirements. The CCS method would be a good but temporary option for CO₂ reduction. With the DRI technology, which is already being used elsewhere in the world, pig iron can be made from hydrogen or natural gas. Although it requires a radical change in the production process, it is a choice for the long term. Moreover, this paves the way for faster replacement of older installations, resulting in a substantial improvement of the immediate living environment.

In September 2021, management decided to review its climate strategy and fully focus on the production of green steel via the hydrogen route. It is good for the climate and also has the most benefits for the community.

Tightened climate ambition

TSN has the ambition to achieve its CO₂ reduction by 2030 in line with the Dutch Climate Agreement and the Coalition Agreement, and is investigating the feasibility to increase such reduction from 35% to 40%, thereby reducing CO₂ emissions by up to 5 million tons per year by 2030 (against the baseline of 12.6 million tons per year).

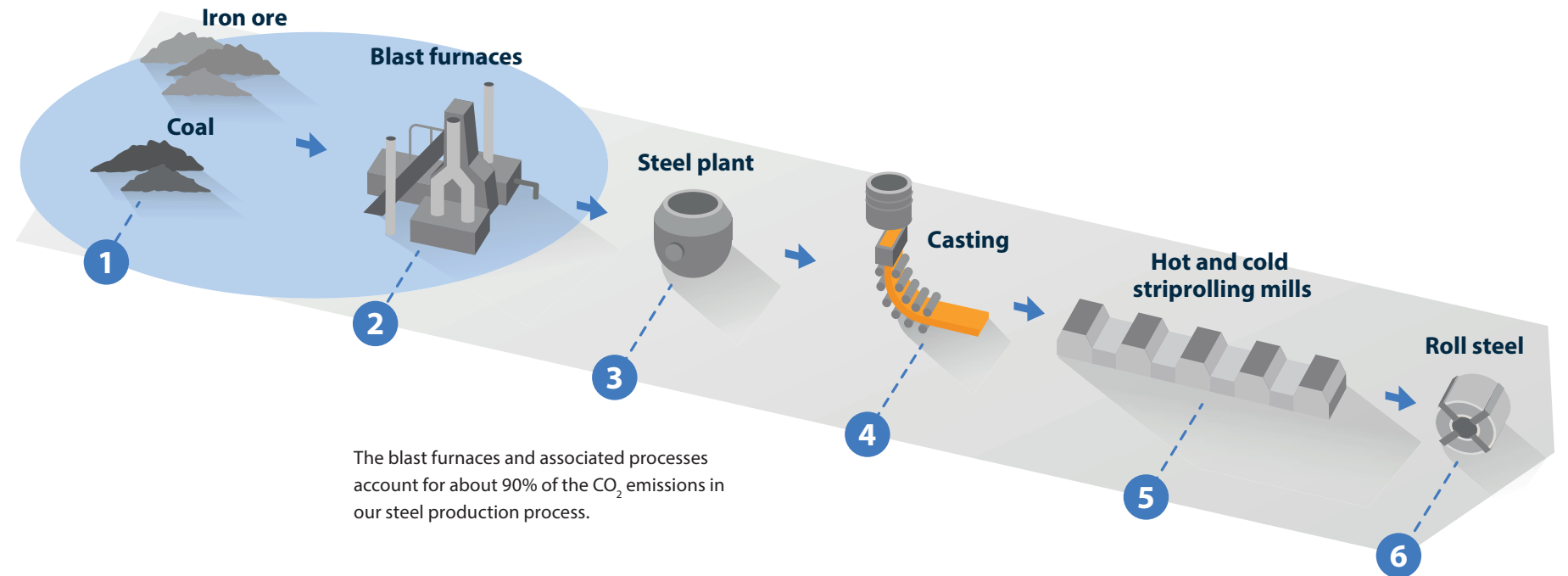
CO₂ emissions (million tons)



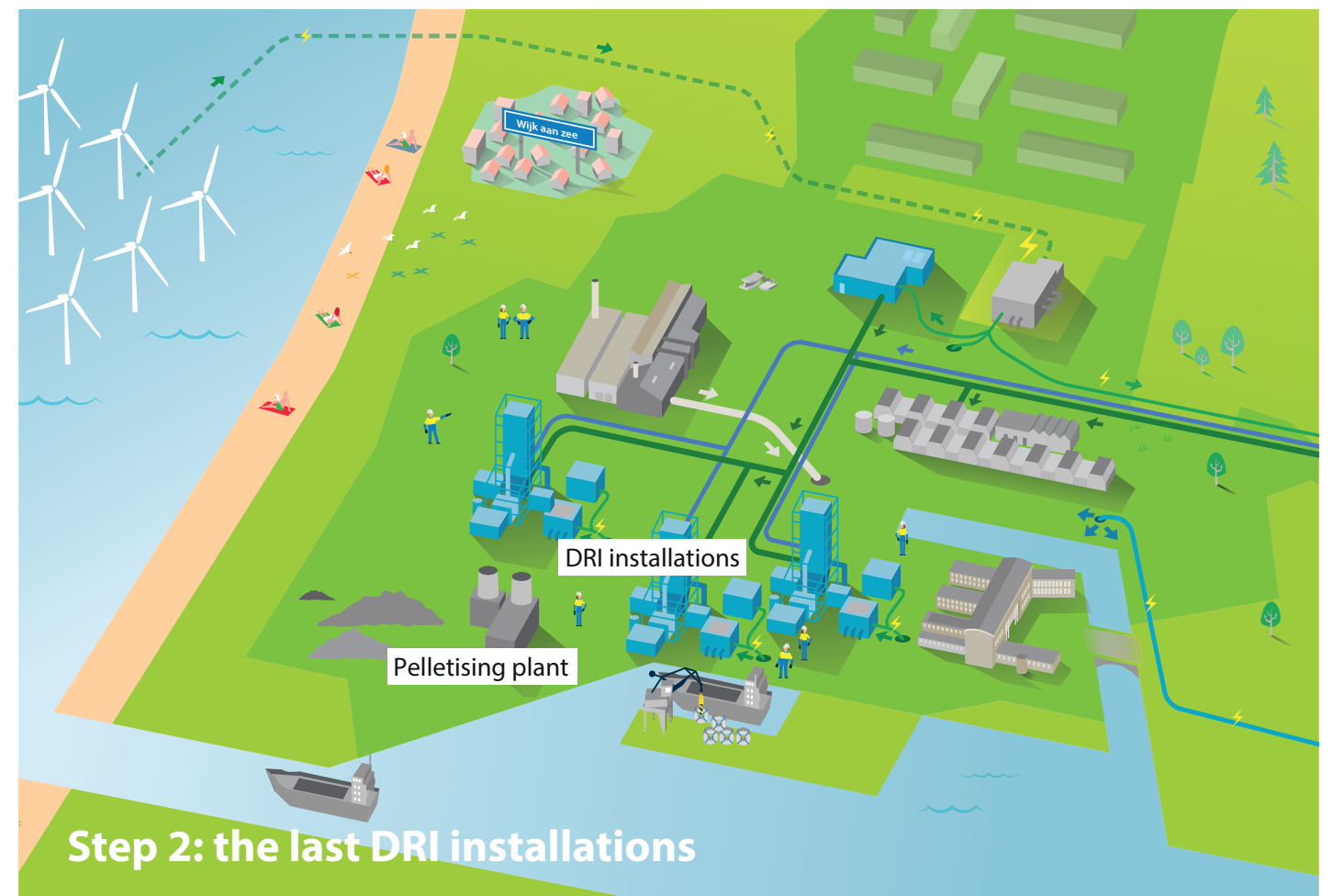
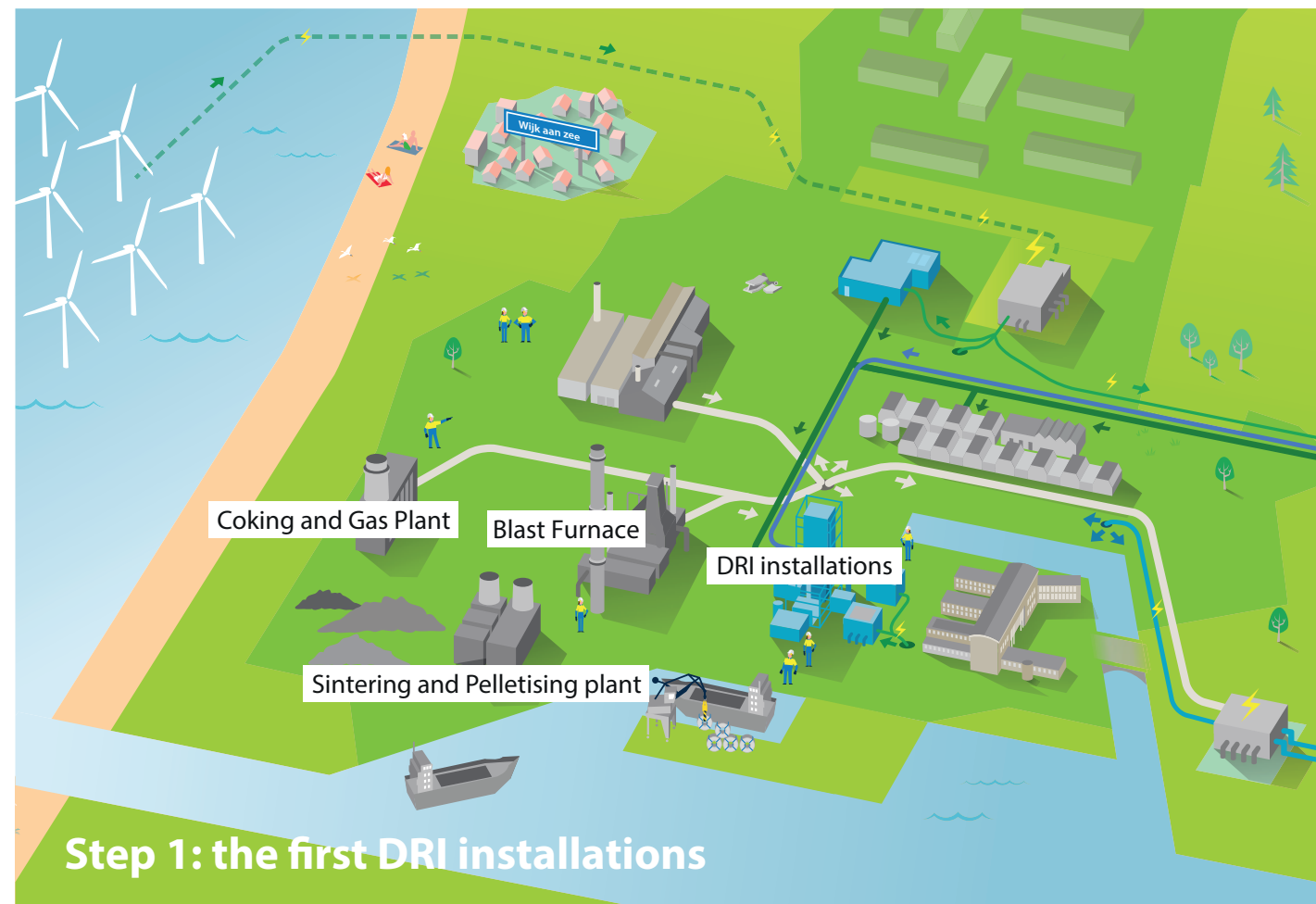
3.3 New climate strategy

Switching the heart of steel production to clean technology

To make steel production in IJmuiden more sustainable, it has now been decided to replace the heart of our production process with DRI technology. This is a technology in which iron ore is not reduced in a blast furnace, but in a DRI plant. The reduced iron is then further processed into hot metal in an electric furnace. Unlike a blast furnace, the DRI plant uses hydrogen or natural gas instead of coal. Tata Steel has the ambition to replace a blast furnace and Coking and Gas Plant 2 with new, cleaner installations by 2030, so it can largely stop using coal. Our ambition is to replace the remaining blast furnace after 2035 and to take the last additional measures to enable us to produce steel CO₂-neutral in IJmuiden before 2045. With the decision to build DRI plants, Tata Steel is preparing for a possible hydrogen economy in the Netherlands, thereby accelerating the production of (green) hydrogen in our country. If insufficient hydrogen is available, the new installations can also be started on natural gas.



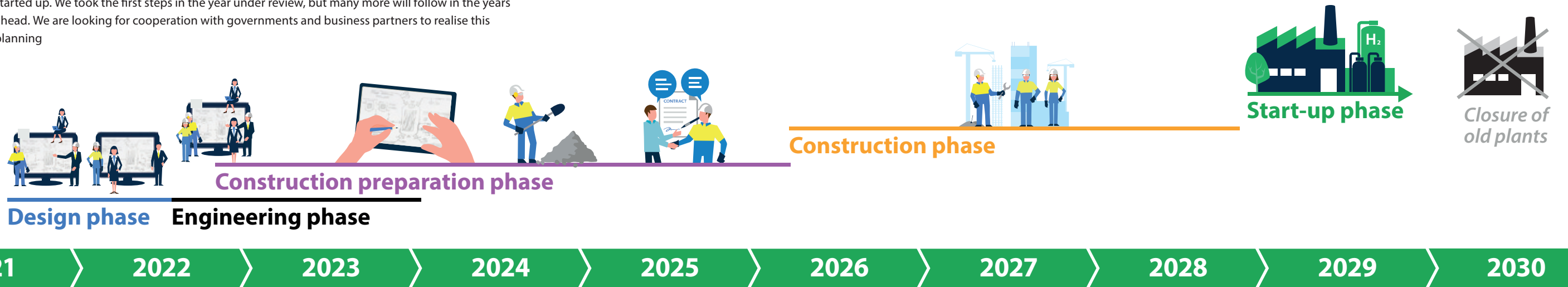
The blast furnaces and associated processes account for about 90% of the CO₂ emissions in our steel production process.



3.4 Accelerated switch to green steel

Ambitious planning for starting up new installations

Years of preparation, design and construction are required before the new installations can be started up. We took the first steps in the year under review, but many more will follow in the years ahead. We are looking for cooperation with governments and business partners to realise this planning



The entire process of switching to DRI technology consists of five phases:

<p>Design phase (until summer of 2022)</p> <p>In this phase, we make crucial choices about the design of the DRI plant. We also select the companies that will build the installations. During this time, we get a clearer picture on what impact our choices have on emissions and what investments are needed.</p>	<p>Engineering phase (summer of 2022-early 2024)</p> <p>In this phase, we work out in detail how the new installations function, how they are supplied with energy, how the connections are integrated into surrounding installations, including the Steel plant, and where the residual streams are reused in the production process. During this engineering phase, we start with the associated permit process. This must be completed prudently. However, an accelerated procedure is necessary to achieve 2030.</p>	<p>Construction preparation phase (2022-2026)</p> <p>In this phase, we prepare for construction. In the meantime, the details of the plants and supplies are being worked out and we continue with the permit process. In this phase we also start the tendering process for the new installations.</p>	<p>Construction phase (2026-2028)</p> <p>This phase, in which the construction of the new installations takes place, can start as soon as the permit process has been successfully completed. Our goal is to deliver the installations by the end of 2028.</p>	<p>Start-up phase (2029)</p> <p>After completion of the new plants, we will start them up step by step. When everything functions properly, we can close a blast furnace and a Coking and Gas Plant.</p>
---	---	--	---	---

More information
 We report on the progress of our switch to green steel production via our website. www.tatasteel.nl/groenstaal

3.5 Climate strategy in progress

Moving forward with each other

We set to work quickly in the second half of the year under review. In December 2021 we decided where the new installations will be located and where the current activities will be moved to. In the same month, we signed a contract with TenneT for a connection to their high-voltage grid. This means Tata Steel will have a customer connection when wind energy is landed from offshore wind farms.

In January 2022, we selected two technology suppliers who will work with us to technically develop the DRI route. By giving not one but two parties this assignment, we gain a faster and better insight into what the best design is for Tata Steel. At the same time, together with the trade unions, we are investigating the impact on employment and how we can attract enough experts, who are desperately needed in the coming period.

The first phase of the participation process started in February 2022. In addition to our own people and substantive experts, we also involve our neighbours in the immediate vicinity, (semi-public) governments and local and regional businesses in this transition. This is in line with the spirit of the new Environment and Planning Act, which, although not yet in force, is fully in line with our ideas.

By involving people at an early stage and by prudently providing them with information, we try to allay any concerns. At the same time, we can take advantage of ideas and solutions from the community and realise our plans with maximum support. Participation is done in a structured manner and with great commitment, in particular in the implementation and elaboration of projects, the preparation of permit applications and the Environmental Impact Report.

In the year under review, more than 100 people were involved full-time in the preparations for the transition to DRI technology. Tata Steel will invest 40 million euros in research, design

and development in the first half of 2022 and the scope of the project will increase further in 2022. In the coming years, the team will work closely with numerous parties, such as suppliers of the new technologies, companies that will build the installations, advisers who support the permit process, suppliers of green hydrogen, network operators and potential energy suppliers.

Preconditions

Due to its size and complexity, making our production process more sustainable is a challenge that demands a lot, not only from our company. The necessary speed with which we want to realise the switch to hydrogen makes it essential that a number of conditions are met. The conditions make it possible to make our steel production and the broader industrial sector in the Netherlands more sustainable are:

1. **New infrastructure for sufficient electricity, hydrogen and natural gas and the connection of the steel company to these networks before 2030.**
2. **Timely and prudent issuing of permits: this is essential for the accelerated transition to green steel in a clean environment. The final permit is required by the beginning of 2026 at the latest to meet the current timelines.**
3. **Scaling up the production or import of green hydrogen to at least 100 kilotons of hydrogen per year.**
4. **Financial support to make the necessary investments.**
5. **Financial support mechanisms and a level playing field (fair competition): all this is necessary to make the operational costs of green steel production economically feasible in the future. The availability of affordable green hydrogen is important for this.**

Green Teams and campaign mobilise employees' innovative strength

Employees are closely involved in making the site more sustainable and reducing nuisance. The campaign 'Say No and take action if you can reduce dust, odours and noise' aims to encourage employees to take action themselves.

Special 'Green Teams' involved more than 150 colleagues and they studied how sustainable innovations can be realised at Tata Steel in IJmuiden in 2021. For example, a Green Team investigated the opportunities for shore-side power so that inland vessels can switch off their diesel generators at the quay, resulting in fewer CO₂ emissions. Another notable project concerned the preparation of the electrification of lease cars. The relevant Green Team initiated the new lease contracts, including the realisation of more charging stations on our site. Since 2021, other Green Teams have focused on making buildings more sustainable, promoting public transport to our plant site, installing solar panels and capturing and using CO₂ at the Direct Sheet Plant (DSP).

In addition to teams, employees also take responsibility individually. Administrative assistant Irma Gerritsen has been taking a peg and bin bag with her during her lunch walk for five years to take back the litter - from shrink wrap and polystyrene foam to empty cigarette packs and coffee cups. She was given the honourable Green Helmet for this in 2021.



The employees of TenneT, contractor group NRG and our own Project Engineering department (PTC) have been awarded the Green Helmet for the approach to their project in Wijk aan Zee, whereby due consideration was given to our neighbours in order to reduce the nuisance caused by construction traffic through Wijk aan Zee. The award was received by Rene Kamper, PTC Construction Manager.



Fleet electrification

We also use raw materials economically by switching to electrically powered lease cars as quickly as possible. Tata Steel aims to have a fully electric fleet by 2027. This concerns approximately 180 vehicles, for which several additional charging points will also be installed on the company premises.

3.6 CO₂ reduction Downstream Europe

Various CO₂-reducing measures at locations throughout Europe

New production location in Geldermalsen

In September 2021, Tata Steel commissioned a new plant for the production of steel roof and façade panels. This modern and innovative plant is located in Geldermalsen and houses two new high-tech production lines that further strengthen the leading role of SAB profile for steel profiled sheets and composite panels. The new plant replaces the previously closed production location in Nieuwegein. SAB profile is part of the Business Unit Building Systems within Downstreams Europe.

Not only is it innovative, the construction of the plant building is also sustainable. The production location runs entirely on electricity and no natural gas is used. The 5,300 rooftop solar panels, supplemented with heat pumps, make this possible. In addition, energy-saving techniques such as LED lighting, frequency controllers and automatic shut-down of equipment are used.

SAB composite panels made of pre-coated steel provide thermal insulation for façades and roofs and are recyclable.



Tata Steel Maubeuge reduces CO₂ emissions

Tata Steel Maubeuge in France is part of the Colors Business Unit within Downstream Europe. Here, rolls of steel are processed into products for buildings, household appliances and industry. The renovation programme 'DECARB Four LG2' (replacement of a preheating furnace) launched in 2021 has seen staff working hard, with the aim of reducing CO₂ emissions by 3,340 tons of CO₂ equivalent per year. This amounts to approximately 7% of the site's emissions. In addition, 17,800 MWh of primary energy will be saved per year, approximately 13% of the total energy consumption.

This investment programme was made possible thanks to a subsidy from the French government and fits within the ambition to be climate neutral as soon as possible.



Naantali heat pumps

In Finland, the Naantali Steel Service Centre has switched to electric heat pumps. At the beginning of 2022, 15 heat pumps that use green electricity will be installed on the site. Since electricity production in Finland is already 81% carbon free, this will yield annual CO₂ savings of 56 tons. This is a reduction of 80% of the current CO₂ emissions. Tata Steel aims to have this location CO₂ neutral for scope 1 and 2 by the end of 2022.



3.7 CO₂ reduction in logistics

With successful Zero Carbon Logistics programme

In addition to steel production, steel transport, distribution and storage are also sources of CO₂ emissions. In May 2020, Tata Steel launched the Zero Carbon Logistics programme, which consists of several dozen logistics sustainability projects. This ambitious programme aims to reduce our CO₂ footprint caused by the transport of our product to the customer by 30% by 2030. A reduction of 5% was already achieved within a year.

The first step involved the construction of a much-improved library of logistical emission factors. We are the first steel company in the world to use the GLEC (Global Logistics Emissions Council) Framework for emissions reporting.

With this, we made the CO₂ footprint of different logistics modalities comparable. This enabled teams from the Logistics department to identify emission hotspots throughout the supply chain and come up with improvement measures. Thanks to the library, we now also

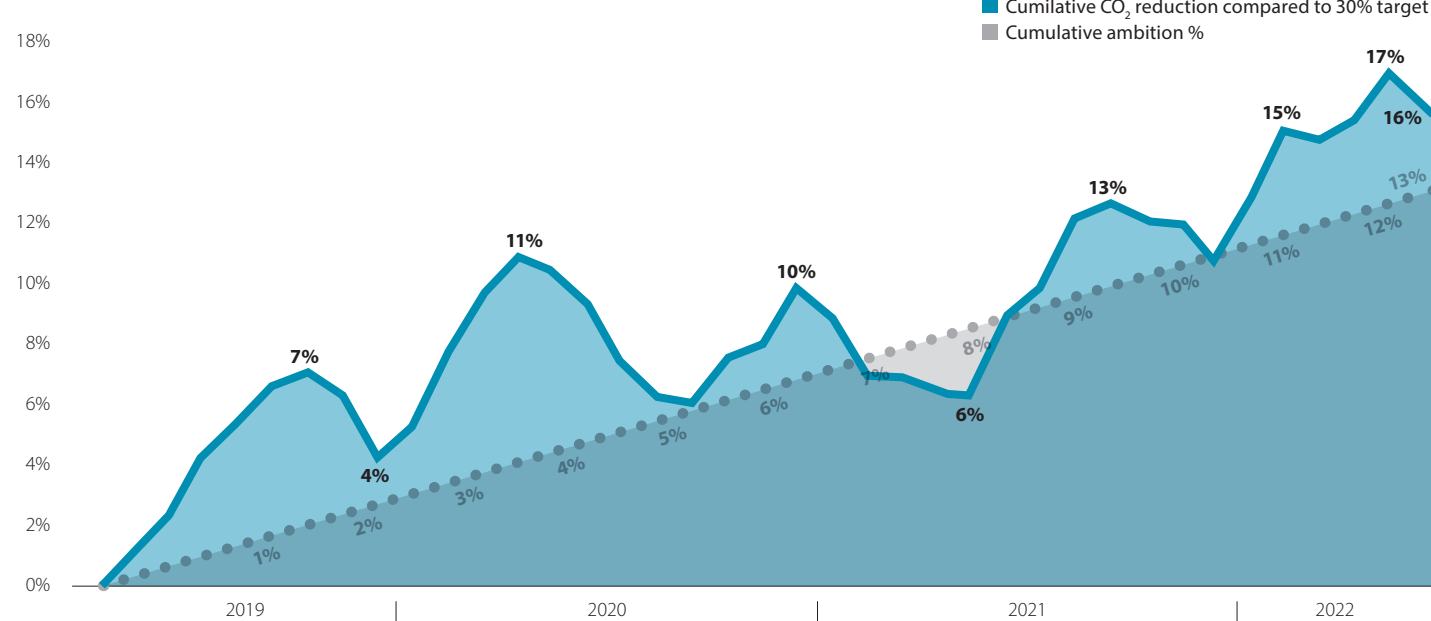
meet the increasing demand for information from customers about the emissions associated with the transport, distribution and storage of steel.

The GLEC method quickly gained international recognition and is used as the basis for a new, unambiguous ISO guideline (ISO14083 - Quantification and reporting of greenhouse gas emissions of transport operations). Publication of this standard is expected at the end of 2022. Tata Steel Nederland aims to be certified in 2023.

Steele Award for Zero Carbon Logistics

In 2021, the Zero Carbon Logistics programme received the Steele Award 'Excellence in Sustainability' from the World Steel Association. This award is best compared to the Oscar for best actor/actress. After nomination by an expert group, the winner is chosen by a panel of internal and external judges.

Cumulative CO₂ reduction Zero Carbon Logistics Programme (cumulative CO₂ reduction %)



Logistics is optimising as a team

Supply chains consist of a chain of organisations that transport or are involved in the transport of goods. We can only achieve substantial sustainable results through cooperation. This is therefore the key theme in Zero Carbon Logistics. We are working with our chain partners on the use of alternative and cleaner fuels. We also work with NGOs, such as the Smart Freight Centre. The Sustainable Freight Buyers Alliance was launched during Smart Freight Week in 2022. Tata Steel has been a member from day one. We also seek affiliation with knowledge institutions, such as universities. In 2022, we gave a guest lecture for the second time for the Logistics Sustainability students of the Kühne Nagel Logistics University in Hamburg. Nevertheless, we recognise that CO₂-neutral logistics still has a long way to go. That is why we are also talking to customers about the possibilities of offsetting CO₂ emissions.

Smart algorithms chart a sustainable course

Every year, more than 100 ships with raw materials call at the ports of Tata Steel in the Netherlands. Information about the most fuel-efficient route is essential for the course these ships sail. This data is now directly deployed using new optimisation algorithms, a facility offered by Optimum Voyage. The result? A saving of approximately 5% CO₂ emissions.

More transport by rail

In recent years, we have seen an immense growth in our freight transport by rail. This has led to a specific reduction in our road transport (more than 5,000 trucks per year). We have specific plans to have even more freight transported by rail instead of by road. Implementation is related to the attention for rail freight transport in the Netherlands.



Copyright: Deutsche Bahn AG/Wolfgang Klee

3.8 Raw materials efficiency

Being economical with everything we need

The steel company in IJmuiden strives to use raw materials and energy as efficiently as possible. That is why we reuse almost all substances that are released in and around our plants. This not only has economic benefits, we also save on natural raw materials, reduce our CO₂ emissions and prevent the generation of waste.

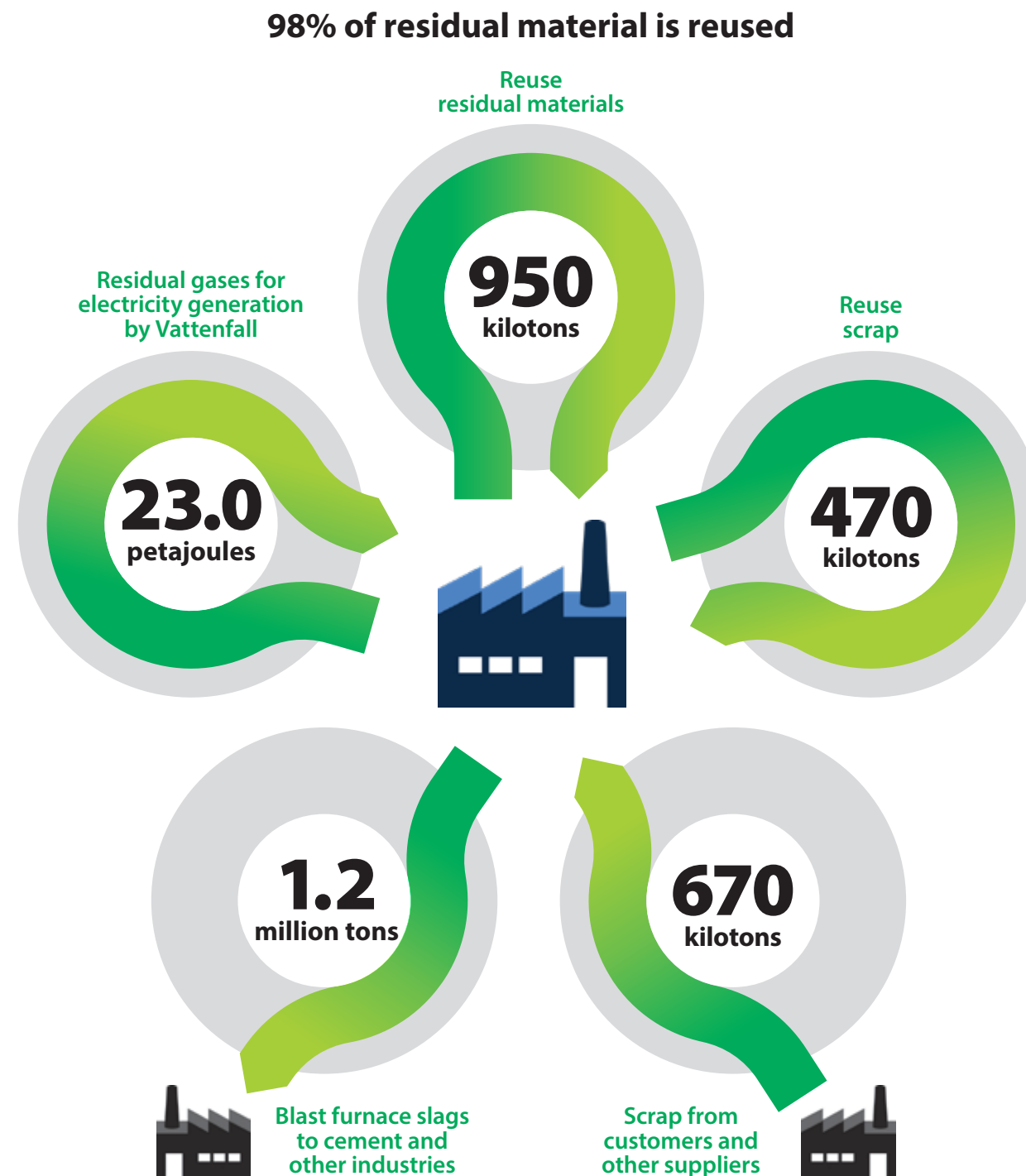
Residual materials are collected or recovered via a dense and complex system of streams. When making steel, the residual material from one plant is often the raw material of the next. This varies from the refractory material in steel pans that, after replacement, is reused as raw material in blast furnaces, to blast furnace slags that find their way into the construction and concrete industry as a high-quality raw material for cement, and steel slags that are used in foundations of roads and other engineering structures.

To produce 6.6 million tons of liquid steel, Tata Steel needs approximately 13.8 million tons of raw materials. In the past year, Tata Steel was able to reuse over 950 kilotons of residual material, which meant we did not have to buy it again. The residual material complies with the reuse regulations and is recovered from, among other things, the cleaning residues from the plants, spilled pellets, raw materials under conveyor belts and sinter grit, and the dust that is collected by the fabric filters.

In addition, we are increasingly using scrap from, for example, the metal processing sector (primary scrap), the demolition sector and the waste-processing sector. In the year under review, Tata Steel used 670 kilotons of scrap from customers and other suppliers and 470 kilotons of scrap from its own production processes. Every year, we use more than 1.1 million tons of scrap in the production of steel; in total 17% of steel production is from scrap.

Heat and electricity

We reuse the collected residual gases in our own processes so we need less natural gas. The remaining residual gases are converted into electricity in the Vattenfall power stations in Velsen-Noord. Vattenfall generates a considerable amount of electricity with the residual gases; about 6.39 Twh per year (23.0 Petajoules). This energy is for the most part supplied back and used in our production processes.



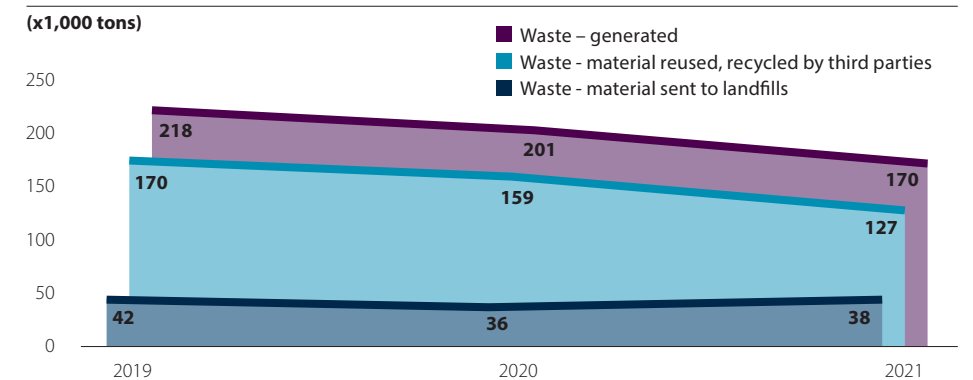
A truck delivers a load of scrap metal to Tata Steel.

Overview of reuse of residual and by-products

In 2021, 98% of all imported and raw materials were consumed, both in our own operations and by third parties. Only 2% could not be reused and remained as waste material. Although this very little already, we are still striving to further reduce this percentage.

In the past three years, we have seen a decrease in the amount of waste produced and, as a result, in the reuse of this waste.

Tata Steel IJmuiden Waste



Developments change circularity

The recent decision to make steel from hydrogen instead of coal will also have consequences for all kinds of existing circular solutions and for the residual and by-products that are purchased in other sectors. Tata Steel works closely with scientists, industries and other partners to foresee and adapt to future changes in our processes.

The switch to hydrogen-based steel production will affect the amount of slags; a residual product for Tata Steel, but an important raw material for the cement and concrete industry. For decades, cement manufacturers such as ENCI have avoided using the primary raw material marl by using blast furnace slags. Since 2021, we have been investigating how we can set up our process in such a way that we can still guarantee this supply of slags (an important building material), albeit in lower volumes.

3.9 Responsible purchasing

We tighten purchasing strategies with new insights

Tata Steel Nederland embraces the OECD due diligence guidelines for responsible purchasing. In doing so, we increase our influence to improve conditions in countries where we purchase raw materials and goods. Tata Steel strives for responsible supply chains when purchasing raw materials and goods. Since 2019, we have therefore been affiliated with the Metal Covenant, an initiative of the Social and Economic Council (SER) to make purchasing chains more sustainable.



During the reporting period, we purchased a database from an external party with the risks per country regarding aspects such as deforestation, human rights and biodiversity. It concerns a total of 32 aspects. In addition, we have asked our suppliers to provide insight into their supply chains, which has resulted in a database of the materials we purchase and the countries where our suppliers source their raw materials. The combination of both databases gives us an overview of the risks for each (raw) material we purchase, including the specific supplier and the country of origin.

Based on this data, our purchasing teams obtain a complete and objective insight into the specific sustainability aspects of the raw materials and goods we purchase. This gives us the opportunity to start a dialogue with our suppliers and also to apply a uniform purchasing policy.

Based on these insights, we are constantly fine-tuning our purchasing strategies, with the aim of further increasing our positive influence in the chain.

Interview Chantal Dekker, purchasing trainee

On a mission for responsible purchasing of manganese

In June 2021, ActionAid published a report on manganese mining conditions. An urgent and relevant story, because the demand for manganese will increase sharply due to the energy transition. And with it the pressure on the mines.

“Within our Responsible Sourcing team, we are working hard to improve our responsible purchasing process. The report was therefore a good reason to look at how we can start a dialogue about improving the situation in the mines. Manganese emerged from our database of risks in the chain. This made this a good case for gaining experience with multiple parties in the chain. Together, we achieve more than on our own.”

“Tata Steel does not source manganese directly from mines. We obtain this from producers in the form of ferro-manganese. The first step was therefore a consultation with producers and traders to further map the supply chain

and identify risks together. We then started a broader dialogue with all kinds of organisations mentioned in the report, such as NGOs, CSR advisors and ministries.”

“The insights from these dialogues give us the opportunity to visit the mining companies with one of our largest producers and to continue our studies. Together, we’ll go on a mission in the summer of 2022. We’ll be visiting two mines and we’ll be going into dialogue with management. We want to learn from their side of the story locally. So we’re not going to wave this report at them and tell them how to improve things, but we’re going to talk about the risks. And how



we can realise improvements in the chain together. Improvement starts with awareness, and that starts with showing genuine interest deeper in the chain. Only then will there be understanding and space for action.”



Manganese mine in the Kalahari, South Africa.

4 PEOPLE & SOCIETY



4.1 Employees make the company

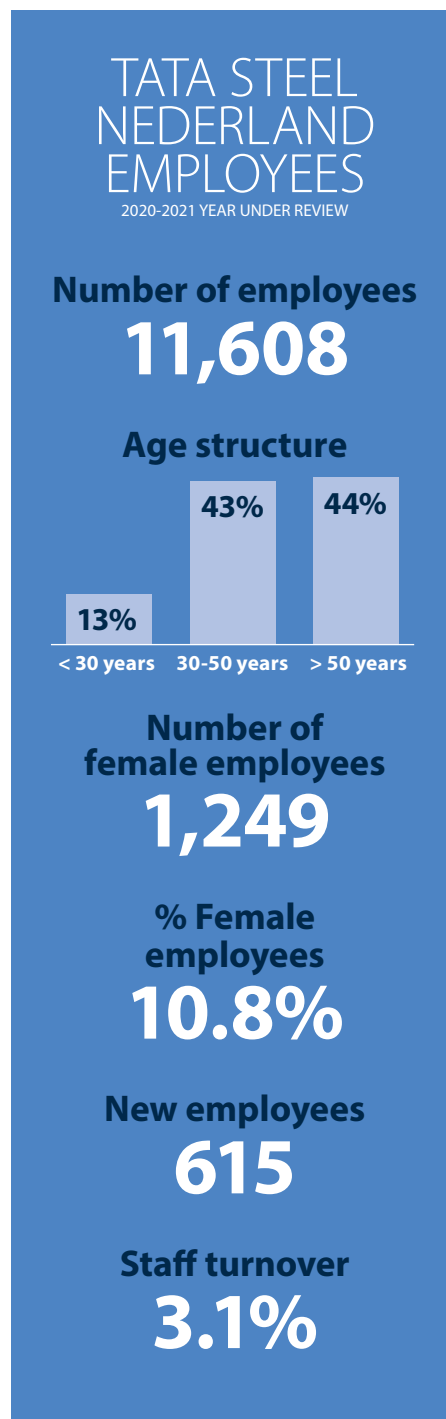
Investing in the well-being, health and fitness of our employees

Tata Steel employs highly specialised and motivated employees. Many of them are long-time employees and trained in our Tata Steel Academy. In the coming years, we will be recruiting a lot of new staff to absorb the outflow of older colleagues. With a safe, inspiring and inclusive working environment, we aim to have sufficiently motivated staff in the coming years.

Tata Steel is committed to the health, mental well-being and employability of all employees. Safety at work has the highest priority in this regard. We also create a working environment in which equal opportunities are offered. We invest in the training and development of all our colleagues, whether they are employed or otherwise affiliated with us.

Dear (home) employer

In the large organisations category, Tata Steel IJmuiden was named the best (home) employer in the IJmond region in March 2021 by the 'Zo Werkt Het' national mobility platform. A nice reward for the effort to support approximately half of our 9,700 employees in working from home, and to keep the other half safe and healthy at work.



Interview Tatum Mooij, crane operator

“I can handle tough guys. And they can handle me.”

“What we’re doing here is huge. It’s just a mini-city, and I also see what we’re doing, how many improvements we’re making and how carefully we try to work. I am not particularly concerned with the criticism of our company, but when people address me about that ‘polluting’ company, I tell them how we want to improve our operations. I always remind them of their electric cars and their washing machines that can run laundry at 30 degrees. Because they’re made of our steel.”

“It was clear early on that I wasn’t a typical girl, but a girl who preferred playing with cars. I didn’t even have dolls. After my

level 3 and 4 Electrical Engineering at the Tata Steel Academy, I started working at the breakdown service of Raw Materials Logistics. I enjoyed doing that for two years, but eventually switched to production, because Raw Materials Logistics Production had attracted me for quite some time. This part of the business has a reputation for being ‘rough’, but I can handle that well. And the great thing is that those men can also handle me. I’m sure they love having the first female crane operator in their midst.”

“I don’t know if I’m an example for other girls. I do hope so, of course, because what we do here is really beautiful. It’s just a mini-

city, and I also see what we’re doing, how many improvements we’re making and how carefully we try to work. I like the dynamics of the port every shift.”

“I’ve been with the company for seven years now and I want to experience many more. And I can because there are so many possibilities, you can always do something else, if you want to grow, become a team leader for instance. I’d like that. My mother is my greatest example. She has been working in IJmuiden for thirty years now and has done so many different things, and after all these years at Coking and Gas Plant 2, she still enjoys it.”



4.2 Safety

Getting to work in one piece

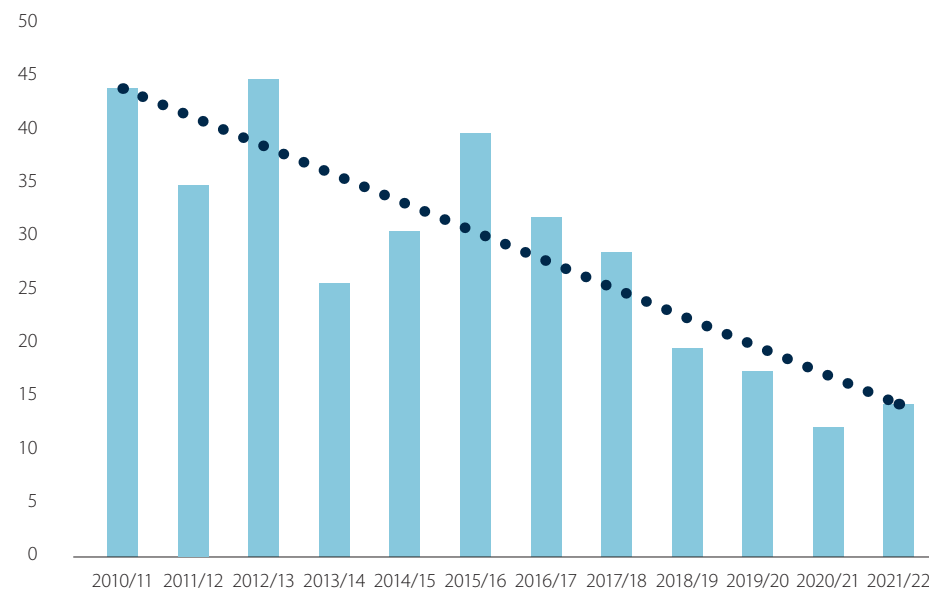
Over the past two decades, we have invested heavily in the safety culture. This has led to many improvements, which is reflected in the safety performance. However, we see a stabilisation in the lost-time accident statistics, similar to comparable industries. Most lost-time accidents have a relatively limited effect or potential effect, which is why the incidents with potentially serious injuries in particular have been taken into account. Several improvement programmes are now running on this, with a more systematic and less situational character.

The basis of safety is that we properly map out the risks and, if necessary, take action. We have set up robust processes within Tata Steel for this. For the first, we have the Risk Inventory and Evaluation (RIE), for the second, the task risk analysis in the work permit. Gradually, these systems were complete, but they also became increasingly bureaucratic. In 2020, a start was made on removing red tape, with the result that working safely is not experienced as difficult, but easier (and more fun). The time gained can be used to collectively reflect on a safe(r) working environment.

Recognition for safer logistics
Based on a three-year programme, we have recently paid a lot of attention to logistics within our operations management: transport and storage. In doing so, we systematically broadened our scope: gradually, all types of transport and storage of our products and other materials were included in the safety of our road transport. We also developed additional, company-wide safety standards for the lashing and storage of steel products. During the programme, we worked closely with all logistics service providers. The result is that the number of transport safety incidents fell to 14 in the 2021/2022 year under review. We have noticed a clear downward trend since 2010/11.

For this Zero Harm Logistics programme, the World Steel Association rated us "Excellent".

Transport safety incidents



Falling trend in transport safety incidents as a result of the roll-out of a logistics safety programme.



Safety Centre

Tata Steel has been making extensive use of contractors for many years. These specialised businesses often have a long affiliation with our business. They fulfil a relevant task for almost every part of our production process, often for maintenance, and elsewhere in our company. Apart from the production processes, we also work together in the Safety Centre. In this centre, we lay the foundation for a safe working environment in our plants and other buildings, as well as for safe traffic on our business premises. At the centre, all Tata Steel employees and our subcontractors are trained in safe working practices and tested before they are allowed to work on site. The Safety Centre has now been in existence for more than five years and complies with expectations. During this period, an effective e-learning tool has been developed: in eighteen languages and for different devices. More and more attention is requested in the social dimension of working safely, under the motto 'working safely is a shared thing'.

IJmond Safety Platform

The fifty most important subcontractors of Tata Steel IJmuiden have united in the IJmond Safety Platform, VPIJ. The VPIJ is a platform by and for the contractors to inform each other about safety initiatives, lessons learned from accidents, etc. Companies that are members of the VPIJ show a consistently better safety performance than the partners who are not. The VPIJ celebrated its fifth anniversary last year. A cause for celebration, to look back on what the VPIJ has achieved with Tata Steel and where we are going. The Safety Centre was originally set up by the VPIJ.

Voluntary fire brigade

Our company has its own fire brigade, consisting of six teams of volunteers. These volunteers are all Tata Steel employees who live in the immediate vicinity and know the processes and installations well. The fact that we have a fire brigade of at least seven people available 24/7 is something we are proud of. This means we can guarantee the safety of our employees and our neighbours as much as possible.

Excellent process safety

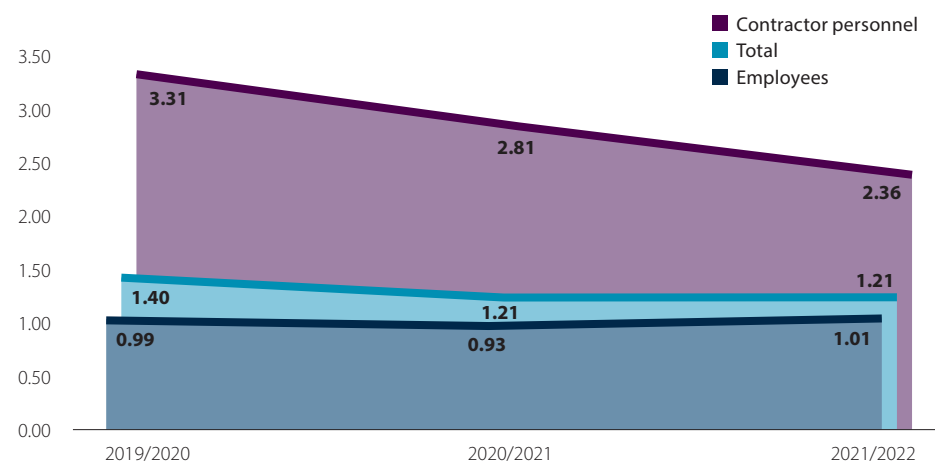
In the context of process safety, an extensive inventory and analysis (Process Hazard Review) was again carried out during the year under review. This included, among other things, the regular review and updating of the risks of fires, explosions and released gases and liquids, and of the associated control measures. Last year, the Disaster Management Plan was also revised in cooperation with the Kennemerland Security Region. The plan has been updated to effectively combat larger incidents.

HEALTH AND SAFETY FIGURES
2021-2022

Number of fatalities	
Employees: 0	Contractor personnel: 0
Number of lost time accidents	
Employees: 19	Contractor personnel: 8
Number of Recordables	
Employees: 74	Contractor personnel: 40
Sickness absence	
5.39%	

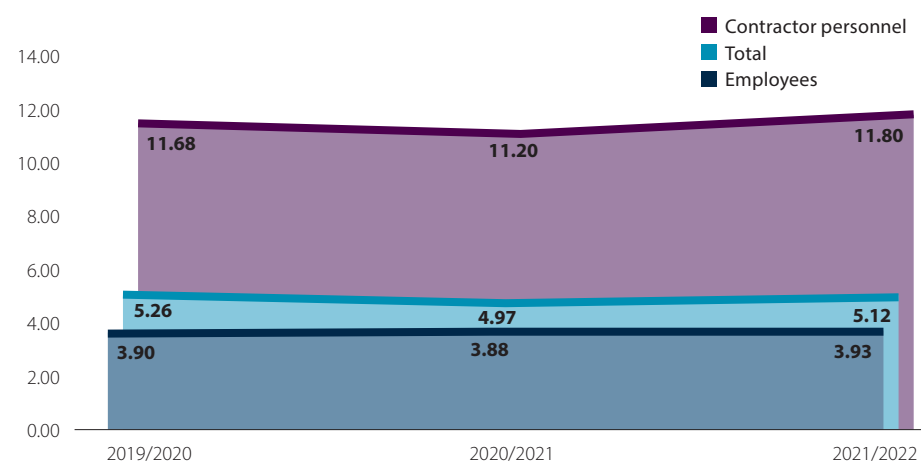
0 fatal incidents Tata Steel Nederland in the past 3 years

Lost-Time Injury Frequency Rate



The Lost-Time Injuries Frequency Rate (LTIFR) shows the number of incidents that lead to absenteeism per million hours worked. The decrease that has started since 2019 is mainly caused by fewer lost-time accidents by the contractors.

Total Recordable Injury Frequency Rate



The Total Recordable Injury Frequency Rate (TRIFR) shows the number of medical treatments without absenteeism per million hours worked. We see a stabilisation in the number of recordable accidents.

4.3 Health & fitness

Fit at and after work

Tata Steel IJmuiden needs employees who are energetic, motivated and competent. Our challenges are diverse and numerous. We are dealing with an ageing workforce, a more flexible labour market and an ever-increasing technological advancement of labour. Sustainable employability is therefore receiving increasing attention at all levels.

A significant number of our employees work irregularly and/or have physically demanding work. Crucially for them, and for our other employees, we believe they must be able to continue to be fit whilst doing their jobs, and that they also lead a high-quality and enjoyable life. The knife cuts both ways: happy, energetic employees are more productive and make the organisation future-proof. Tata Steel has therefore developed a policy in the field of sustainable employability, in close collaboration with employees, the works council, trade unions, management and the HR and HSSE departments. Based on this policy, we developed a set of sustainable

solutions, which vary from interventions aimed at lifestyle to interventions related to the physical and psychological strain of work. For any solution to be offered, they are first tested in practice.

Employee platform

Employees receive support in various ways. The TSIJ online employee platform 'Tata Steel Sustainable Employability' plays a central role in this. 30% of the employees have registered for this platform, and is the place where studies are conducted in the context of sustainable employability.

Need for autonomy

Earlier studies showed that employees want more autonomy over their own working hours and shifts. Pilots on flexible working hours and working from home for day and office shifts were therefore carried out in 2021. We conducted a pilot for the five-shift system in which employees can schedule themselves, for example, fewer or more night shifts. Both pilots confirmed the results of the studies carried out. Moreover, the pilots were carried out well by the employees involved. Flexible working, with the option to work from home more often, is now a practice. Self-scheduling in shifts turned out to require more organisational changes around the shifts before being widely implemented.

Personal support

Managers are trained to discuss sustainable employability with their employees and to support them in improving their own employability. Fitness buddies are trained to identify (initial) mental problems in colleagues, to discuss them and to offer help in looking for a possible solution or appropriate assistance.

Incidentally, we also have the Confidential Advisers Platform of Tata Steel IJmuiden, to which three new confidential advisers from our own ranks were added in 2021. The team of ten confidential advisers (two of whom are external) is available to employees who need a confidential meeting. In addition, Tata Steel has provided a special support team for incident bystanders.

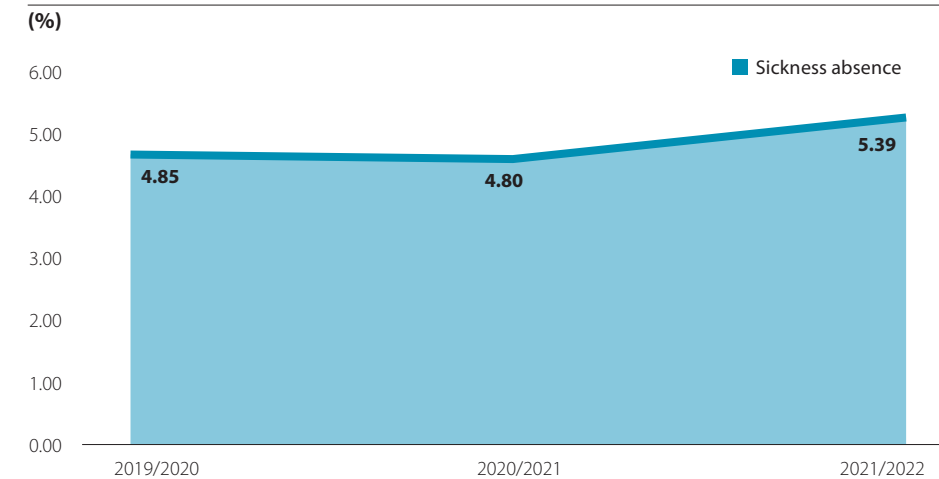


Alert to Covid-19

The restrictions imposed by the Covid-19 outbreak have put a lot of strain on our employees since early 2020. Although the measures were largely withdrawn during the reporting period - given the course of the pandemic - we still observe safety. We all need to stay alert to safeguard both the health of employees and the continuity of (parts of) our operations management. Our production processes were not compromised during the pandemic in 2020 and 2021.



Health results Tata Steel Nederland



The sickness absence rate in the past year was slightly higher than in previous years. Covid-19 is seen as the main cause.

4.4 Equal opportunities

Diversity and inclusion of strategic importance

The Sustainable Employability Policy also explicitly focuses on diversity and inclusion. In addition to being of social significance, this theme is also of strategic importance. When the company is a good reflection of society and employees feel recognised and involved, we can successively count on the best possible policy and decision-making, more innovative strength, greater attractiveness on the labour market and increased employee retention.

The new Diversity and Inclusion programme was drawn up for Tata Steel IJmuiden during the year under review. This programme, which will run for five years, has the following four main goals.

Inclusivity

To begin with, this concerns the improvement of the inclusive work climate. In 2021, an internal survey showed that the vast majority (96%) of employees believe they can be themselves at work. However, a majority of employees with a non-Western migration background and women feel different at work. The majority of these employees also often feel that they are treated differently by colleagues and/or managers. Undesirable behaviour in the form of discrimination, harassment, aggression and/or bullying takes place at Tata Steel IJmuiden, just like other organisations (of any size). Naturally, interventions take place, such as via the Confidential Advisers platform and training courses for managers and teams.

Ethnic and cultural diversity

A second main goal is to strive for more ethnic and cultural diversity in all job groups. In 2021, 7% of the population in the aforementioned 2021 survey turned out to have a non-Western background. For the total Dutch population, the percentage is approximately 14%.

More female engineers and managers

Under the third and fourth main objective, we aim to increase the number of women in technical vocational education positions and in decision-making positions. In terms of technical positions, we aim to employ 5% of women by 2027; an increase of 3%. Tata Steel efforts on this point fall below the average in the Netherlands and we will have to become a more attractive employer for this target group. Incidentally, Tata Steel Academy (see below) has a relatively high percentage of female students: 5%. We strive for a better balance of men and women in decision-making positions. In 2021, the percentage of women in such positions was 18%. This should be at least 30% by 2027.

To realise the goals of the Diversity and Inclusion Policy, the executive board of Tata Steel IJmuiden has decided on an extensive programme of activities to promote inclusivity on the one hand and diversity on the other. This includes communication campaigns, such as via the internal media and inspiration sessions about diversity & inclusion, up to participation in Diversity Day. Also training on avoiding unconscious bias (unconscious prejudice), coaching, facilitating buddies for (young) female managers and meetings under the motto of Future Female Leadership. At the same time, we are studying other options, such as 24/7 childcare, exchanging Christian days for other holidays, and making corporate clothing available with a fit for women.

In 2022, Tata Steel IJmuiden joined the Workplace Pride Foundation, underlining that the workplace should be a place where everyone can be themselves.



Goal: in the next five years (2022-2027)

- the perceived inclusive work climate is increasing. From at least 96% perceived inclusivity (baseline 2021/2022) to 99% in 2026/2027.
- ethnic and cultural diversity in all job groups will grow. From 7% to approximately 14% ethnic and cultural diversity in 2026/2027.
- the number of women in vocational technical positions will grow to 5%.
- the percentage of women in decision-making positions will increase to at least 30%



Girl's Day

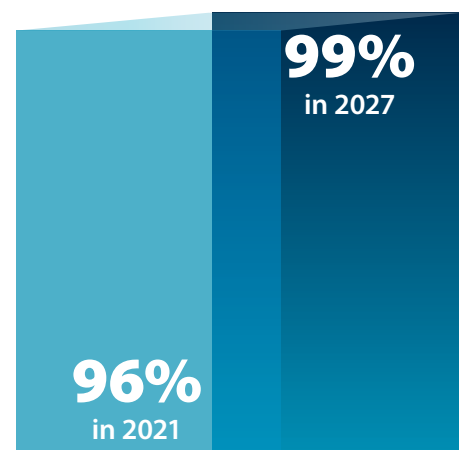
Every year, Tata Steel IJmuiden holds the now well-known Girl's Day, an initiative to introduce girls to technology at a young age. At the beginning of April 2022, 240 girls from eleven primary and secondary schools from the region came to visit. They tackled digital technology in workshops and were introduced to hydraulics, pneumatics and thermography. They also visited the hot-dip galvanising line where coils of steel are given a zinc layer, especially for car manufacturers. They also interviewed women who work at Tata Steel in research, production, service and marketing departments about their own interests, study choices and career.

Wenkebach Fund

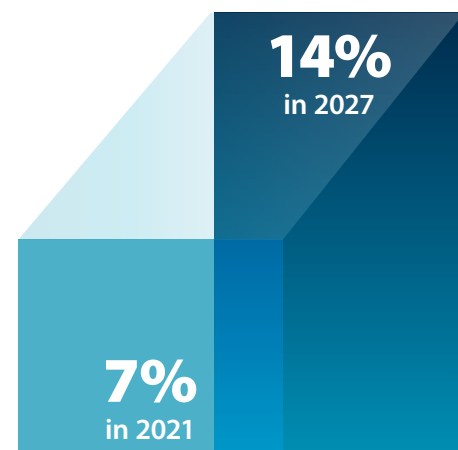
Since 1926, our company has had the Wenkebach Fund, a social fund that provides assistance to (former) employees in connection with costs incurred as a result of serious illnesses or accidents (and circumstances resulting therefrom) and other special situations where help is needed. In the year under review, 554 applications were submitted. Of these, 464 applications were granted.



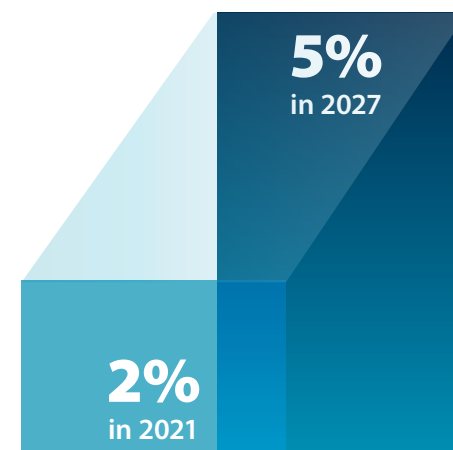
Diversity and inclusion programme Tata Steel IJmuiden



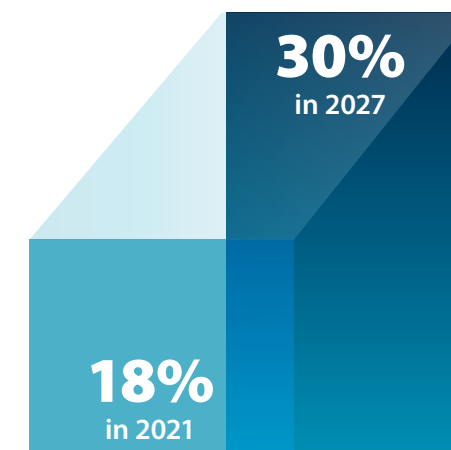
Inclusive work climate



Ethnic and cultural diversity in all job groups



More women in technical vocational positions



More women in decision-making positions

A pay gap study will be conducted in 2022 to clarify whether and to what extent there is unequal pay between women and men.

4.5 Training

Quality through an ambitious training programme

Numerous technical training courses are organised within Tata Steel at its own Tata Steel Academy. Our training centre is not only open to employees of all levels, we also welcome 170 new entrants every year. We work closely with schools in the region.



Corporate academy

The Tata Steel Academy training courses are highly ranked in the Keuzegids, an independent consumer guide that compares the quality of all training courses in the Netherlands. At the beginning of 2020, our process technology training course was awarded the honour of best MBO training course. The pass rate was 91%, against a national average of 65%.

At over 80 years old, our corporate academy is the oldest in the Netherlands. Almost half of our employees started here. The training courses remain extremely popular. We still receive more applications than we have places every year. Nova College provides the theory, Tata Steel the practice. After completing their training, students are guaranteed a job at the steel company. In addition to secondary school students, we also receive many applications from lateral entrants. More than 90% of graduates still work at Tata Steel after ten years.

Level-enhancing training

Existing employees can also participate in technical vocational training at the Tata Steel Academy. In total, more than 400 employees followed so-called level-enhancing training in 2021.

For the foreseeable future, we expect major changes in training needs. The transition to steel production with hydrogen will drastically change the production process. Retraining and refresher training will therefore become increasingly important. In addition, we pay a lot of attention to training in the field of sustainability. For example, all students follow the Sustainability elective, among other things on the basis of presentations and workshops by fellow experts.

Talent development

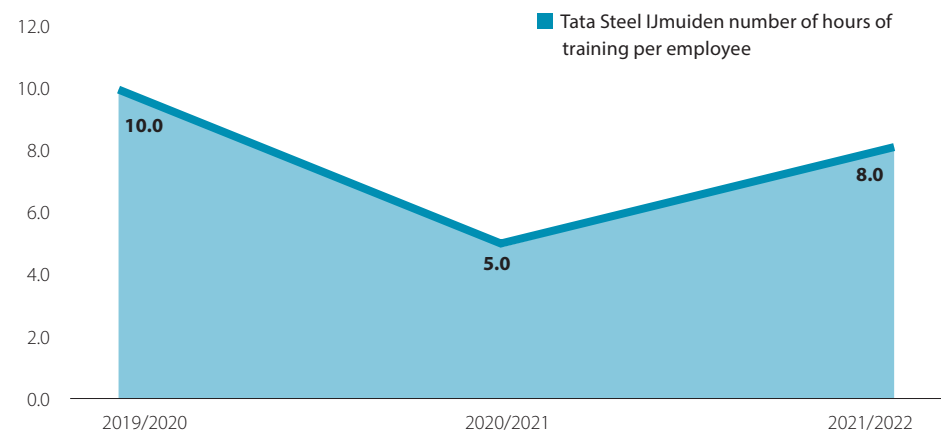
Personal growth and development programmes have come to a standstill in recent years due to budget restrictions and corona measures. Training in this area continued, but online. A total of 39 training sessions for 460 participants were organised.

Traineeships

Tata Steel IJmuiden's trainee programme provides for the supply of young talent for top positions. We pay attention to competencies such as dealing with change, organisational sensitivity, cooperation and contributions to innovation. The trainee programme lasts two years. During the year under review, Tata Steel IJmuiden employed 60 trainees, divided over the disciplines Business trainees (15), Technical trainees (38), Finance trainees (1) and International Technical Downstream Trainees (6). It is striking that in recent years, trainees also wanted to be involved in assignments in the field of sustainability.

Training results Tata Steel Nederland

(number)



5 CUSTOMERS & VALUE



5.1 Investing in the future

Value creation through innovation

Long-term value creation has our permanent attention. We are working on making the steel production process more sustainable through various strategic innovation programmes and we support customers in the efficient and sustainable use of our steel products.

In the Transformation Programme that ran from 2016 to 2022, Tata Steel Nederland improved various processes in its own value chain. The aim was to be able to generate sufficient operational cash flow, regardless of market developments. Various projects have been carried out to prevent unplanned downtime of the production process. In addition, intensive consideration was given to purchasing raw materials more efficiently and making our operational processes more effective. The Transformation Programme has enabled Tata Steel to create more value in the

company for investments in our sustainability plans and for improving our market position.

Investing in innovation

Part of the Transformation Programme is the Strategic Asset Roadmap (STAR) programme launched in 2014, which focuses on long-term configuration of the production process. These are strategic investments to remain relevant in the future, both in the steel market and in society. The STAR investment programme focuses on sustainability of the process and of the product steel itself.

The STAR programme, an investment worth more than 600 million euros, aims to supply the desired high-tensile steel in the future, which Tata Steel IJmuiden largely owes its reputation to. This steel is strong and can therefore be used at thinner gauges, therefore making the end product lighter, both in the processing and use phase. Our (end) users can use this steel to achieve a better CO₂ performance. Despite its strength, this steel is also very flexible and easy to form. The demand for this high-tensile steel is increasing in the automotive industry, the industrial and machine building sectors. To meet this increasing demand in the future, installations in our entire chain of production installations (downstream) must continue to deliver the required performance.

Upgrading and making installations more sustainable

For the STAR programme, we mapped out each link and looked at how installations connect to each other. For each part, such as continuous casting, rolling, pickling and galvanising, it is indicated what is needed to be able to deliver quality and quantity in the future. Sometimes it involves a technical upgrade, such as the hot strip rolling mill, where increasingly harder steel can be rolled even flatter with stronger motors. Simultaneously, a choice is made for sustainability; the new furnace in the hot strip rolling mill, which has a significantly lower energy consumption, is projected for the end of 2022. In addition to technical improvements, the STAR programme also provides for new installations. With a third

continuous casting machine commissioned in October 2021, Tata Steel will be able to produce an even wider range of advanced steel grades, including advanced high-strength steels and ultra high-strength steels. In 2016, we started the construction of this installation, which amounted to an investment of 220 million euros. In addition, we realised various improvements at the Hot Strip Rolling Mill, the Pickling Line, 2 galvanising lines and the Cold Strip Rolling Mill. We will realize the optimisation of the third Hot-dip galvanising line in the short term.

Innovation is an ongoing process at Tata Steel IJmuiden. It concerns innovation that is aimed at sustainability, but also at maintaining or improving the desired market position. The Research & Development department

is continuously working on further improvements to our production process, which means, among other things, that the hot-rolled steel from IJmuiden is one of the best steel grades in the world.



Sustainable profit

To make the steel production process more sustainable, Tata Steel will have to invest many billions of euros over the next ten years. We will partly do this ourselves, but we cannot bear these investments alone. Tata Steel Nederland must be regarded as a credible discussion partner by shareholders, the government, investors, financiers, customers and other stakeholders. That is why at the beginning of 2022, we launched the new Sustainable Profit Programme. This programme focuses on improving the profitability of the IJmuiden operation and our Downstream Europe activities. The aim of this programme is that we can continue to demonstrate sufficient earning capacity in the coming years to enable long-term value creation.

KEY FIGURES INNOVATION

2021-2022 YEAR UNDER REVIEW

Patents granted
202

Patents filed
15

R&D investments
62 million

Newly developed and launched products
10

R&D employees
299



The third continuous caster was commissioned by the King's Commissioner in North Holland, Arthur van Dijk.

Good product quality is more sustainable

At the end of 2021, it appeared that our attention to quality in the company had paid off. The internal discarding and repurposing of steel had fallen by approximately 20% in one year. In addition, the percentage of customer quality complaints fell by 50%. In an absolute sense, out of every 2,000 tons, only 3 tons are returned.

5.2 Research & development

Joint effort with customer and academic world

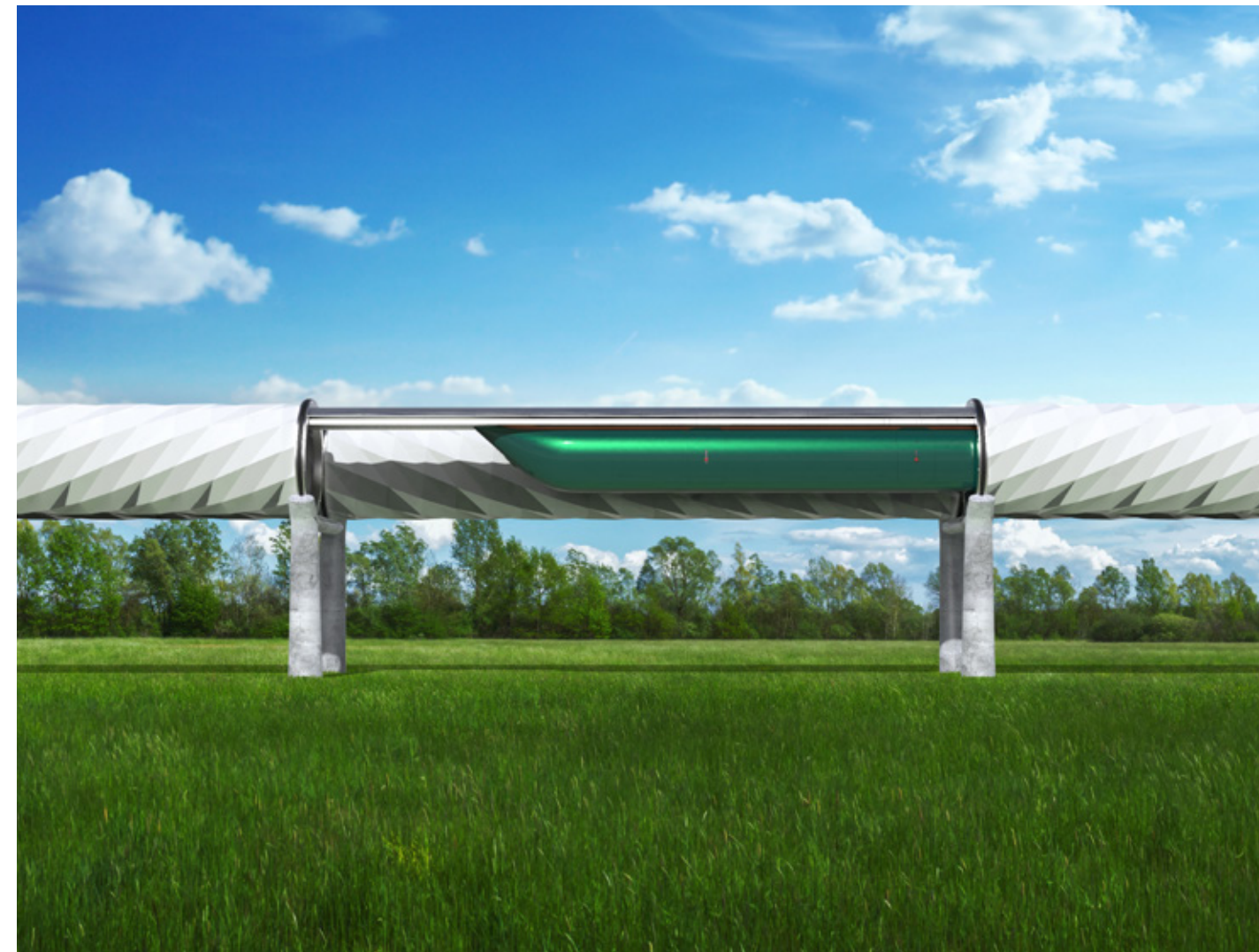
Every year, we manage to further optimise processes and products, often in cooperation with our customers. The Marketing and R&D departments work on products that meet the (sustainability) needs of our customers. In addition to improving our market position, these efforts contribute to resource efficiency and reduction of emissions in the chain. A great deal of research takes place in close contact with the academic world, not just with customers.

Product improvements

Tata Steel IJmuiden has built up a solid reputation when it comes to the production of special steel grades that make cars lighter without sacrificing safety. Cars with a lower weight use less fuel and emit fewer harmful substances. Thinner steel fits into the circular strategy of many of our customers.

For the future, Tata Steel Nederland is closely involved in the development of models for the Hyperloop, a new technology for super-fast and energy-efficient transport. In cooperation with the Posco from South Korea, we are developing a specific alloy for the steel of overhead tubes. Tubes made of steel are relatively light and strong compared to those

made of concrete. In addition, the steel can be easily recycled at the end of its life, which fits the sustainability promise of this new transport system. We also developed smart tube designs, which ensure the tubes with thinner steel remain as strong. We are now in close contacts with companies conducting tests all over the world to test the new tubes.



Process improvements

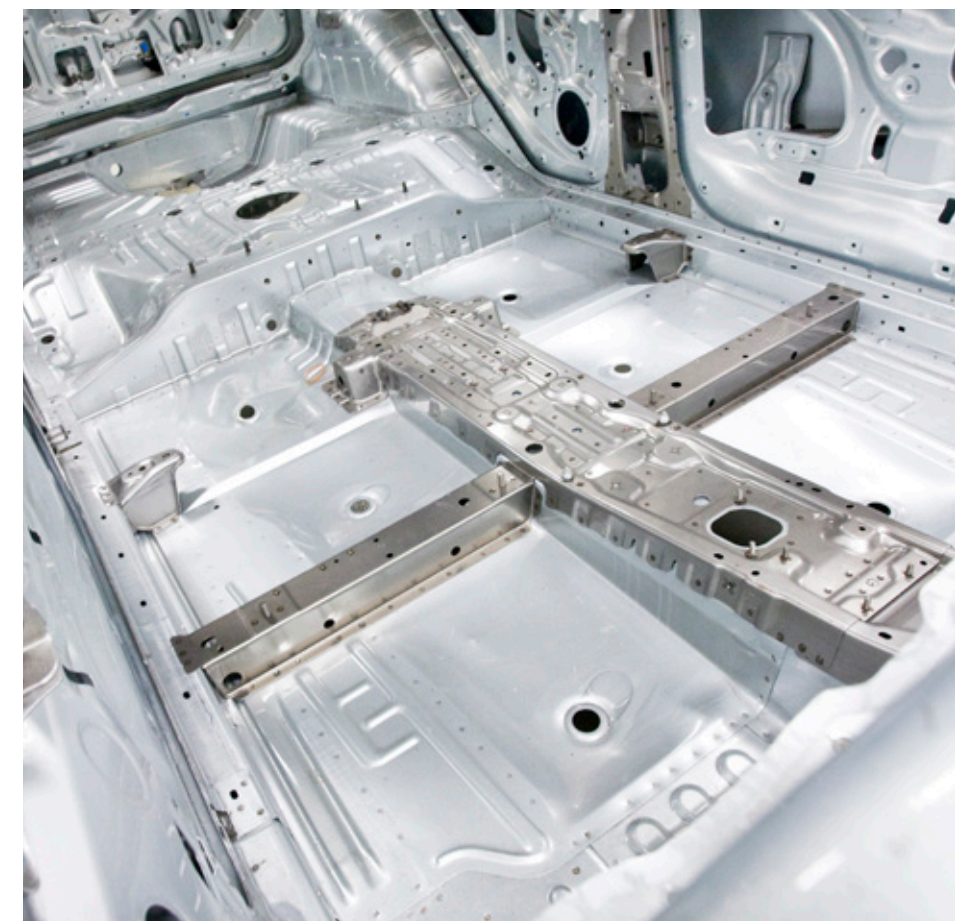
During the year under review, we implemented several important process improvements. For example, we developed new calculation models for the casting machines, allowing for a better casting process of new steel grades with less risk of discard or surface defects.

The new line for our Protact packaging product is running well. This applies a protective coating to food packaging. By carrying out this in IJmuiden, we prevent unwanted emissions at the coating lines of customers further down the chain. Work is now under way to implement a new metallic coating that complies with the upcoming tightening of the European REACH regulation. REACH stands for Registration, Evaluation, Authorisation and restriction of Chemical substances. This regulation applies to all countries of the European Union.

Tata Steel IJmuiden gives priority to the use of more scrap. In preparation, R&D started a study in 2021 into possible negative effects of small percentages of contamination in the scrap, and how to correct this. We also studied the possibilities of sorting scrap as well as possible in advance. We did this in cooperation with academic partners and the plants.

Preparation for Hydrogen/DRI

The R&D department is of course also busy building up the necessary knowledge of the new processes within the hydrogen route. Partly thanks to a great deal of knowledge and understanding of our current processes, IJmuiden is among the top of CO₂-efficient steel producers. Even if we are going to produce steel on the basis of hydrogen, achieving that leading position is essential. This is only possible by understanding in detail how the newly applied technologies can be optimised within the IJmuiden configuration.



5.3 Customers & networks

Intensive dialogue on sustainability

Tata Steel IJmuiden supports its customers in using steel as efficiently and effectively as possible. For example, by advising on the materials selection and optimisation of the production processes on the customer side. During the year under review, we intensified the dialogue with our customers about sustainability.

Tata Steel supplies high-quality steel to the automotive, construction, packaging and machine construction industries. We know the quality of steel is essential for innovative applications in renewable energy and for new modes of transport such as the previously described Hyperloop.

During the year under review, we held discussions with our customers about sustainability. We not only discussed the sustainability aspects of steel as a material, we also examined how we can further improve our value chain together. Questions that arose were about the sustainability ambitions of our customers and how our steel can help with this. This created a transparent dialogue about our product range and sustainable applications of steel. The discussions have resulted in customers gaining a better understanding of the sustainability aspects in their considerations about the use of materials and the possibilities of steel in this regard.

Between March and December 2021, we organised 100 work sessions with car manufacturers and their largest suppliers alone. While in previous years we had to actively look for suitable moments to discuss the theme of sustainability, we were approached by customers in the past year. In addition, it is now not only our experts who

conduct the sustainability discussions, but larger, mixed account teams that enter into discussions with equal groups in the customer organisation. In the year under review, together with our customers, we started various projects aimed at carbon reduction, circularity and sustainable procurement.

Zeremis™ Carbon Lite

Research we conducted in the summer of 2021 shows that our customers are increasingly interested in more environmentally friendly produced steel. They also want to pay a higher price for steel that is less CO₂-intensive. This demand is especially increasing among our consumer-oriented customers with ambitious CO₂ objectives. By using CO₂ low steel, they reduce their so-called Scope 3 emissions and thus make their product range more sustainable. In the summer of 2022, we launched Zeremis Carbon Lite to meet this demand. This steel has a maximum assigned CO₂ reduction of 100%. The lower CO₂ intensity is based on CO₂ reductions realised by Tata Steel Nederland since 2018 and is validated by the independent verification agency DNV.

Since 2021, Tata Steel customers must also pay a CO₂ surcharge. By doing so, we want to show that CO₂ emissions entail (structurally increasing) costs.

Environmental Product Declarations

In 2021, we drafted the fiftieth Environmental Product Declaration (EPD) for customers in the construction industry. This is a milestone in transparency and reporting on environmental impacts. EPDs are a recognised method in the construction industry - based on internationally recognised standards - for describing the impact of a product throughout its lifespan. As a contribution to more circularity of its products, Tata Steel was the first manufacturer to submit an EPD report on its product portfolio. The product-specific EPDs comply with EN 15804 and ISO 14025 standards and have been validated by third parties.



The Power of Steel

Steel plays an important role in our society and can make a significant contribution in terms of sustainability, such as in the field of mobility, transport and the production of wind and solar energy. To draw attention to all these possibilities, Tata Steel developed the The Power of Steel campaign; a series of podcasts and articles in which independent experts, scientists and other parties talk about the role of steel from their perspective.

Branche-organisaties en netwerken

Apart from customers, we also look for opportunities for improvement through various consultations, dialogue and cooperation. To this end, we form networks with customers, suppliers, external institutions, NGOs, trade associations and (semi-public) governments. In addition to VNO-NCW, employers' organisation FME and the Bouwen met Staal association, we are involved in the following organisations and initiatives, for example:

- **Eurofer**; the European trade association for the steel industry.
- **Worldsteel**; our global trade association (worldsteel.org).
- **Responsiblesteel**; in this forum we work together with industry peers and other stakeholders on standardisation and certification with the aim of increasing the sustainability contribution of our industry.
- **Bre**; we participate in this network of experts to contribute to responsible sourcing, such as via the BES6001 for substantiating the origin of materials (bregroup.com).
- **ECH2A**; European Clean Hydrogen Alliance, aimed at developing the hydrogen economy in Europe.
- **Ecovadis**; we are affiliated with this network that assesses supply chains (ecovadis.com).
- **NGC**; a global supply chain risk management & compliance partnership (ngc.com).
- **VigeoEiris**; supports us with ESG ratings and assessments (vigeo-eiris.com).
- **CDP**; a not-for-profit organisation for environmental impact assessment (cdp.net).



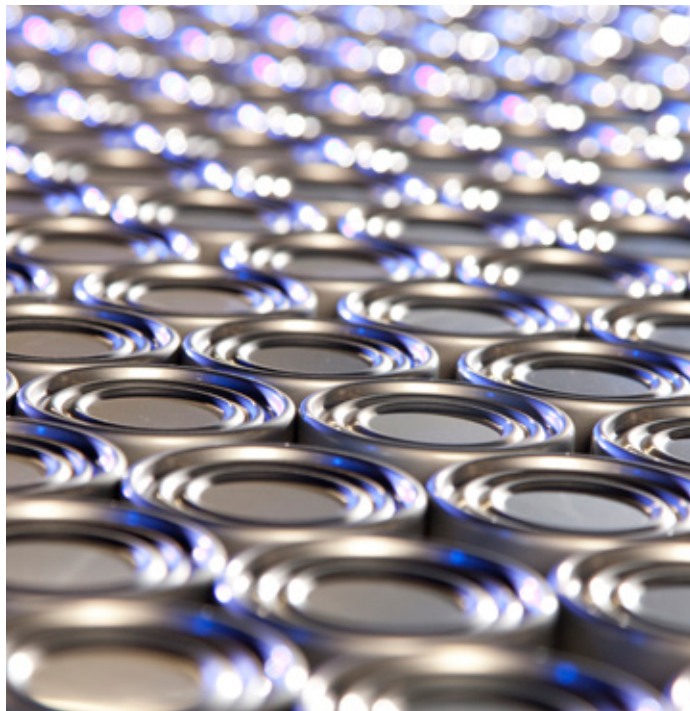
Steel Construction Agreement

At the initiative of the national knowledge and network organisation Bouwen met Staal (BmS), representatives of the Dutch steel construction chain have joined forces to make steel more sustainable in the construction and infrastructure sectors. In the presence of former minister of Housing, Spatial Planning and the Environment and professor of sustainable innovation Jacqueline Cramer, Tata Steel, together with 25 representatives of the Dutch steel construction chain, signed the Steel Construction Agreement. This sets out ambitions for the reduction of CO₂ (60% compared to 1990), reducing the environmental impact of substances with risks for man and the environment and for 'scaling up' circularity in building with steel (by 2030).

5.4 New products

Smarter steel for a better world

With product development, we contribute in the broadest sense to making the economy in the Netherlands and the rest of Europe more sustainable. This starts with developing advanced steel grades that are so strong that they enable customers to make their applications lighter and therefore more durable (thickness reduction). When developing new products, we strive to further reduce the use of raw materials. At least as important is that we contribute our knowledge to product design and development by customers.



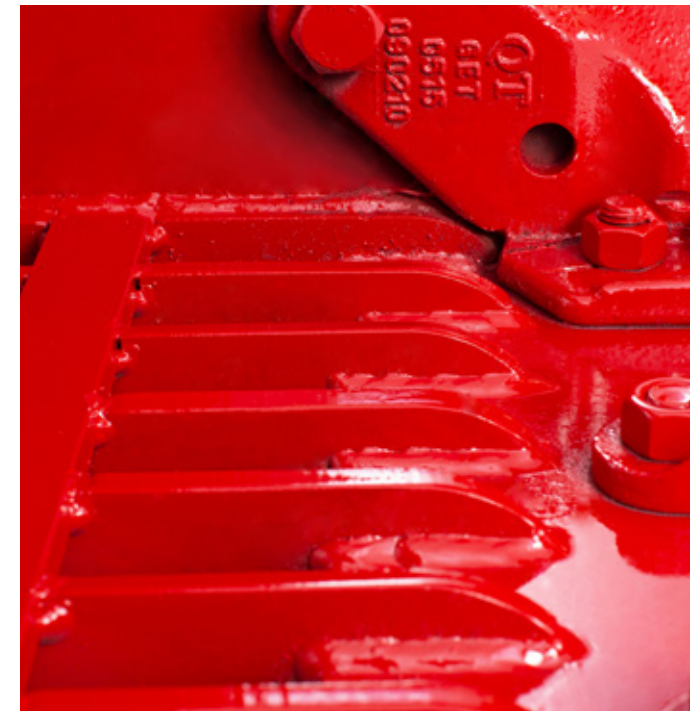
TS550 tin-plated steel

TS550 is thinner packaging steel that enables further sustainability of the packaging industry. Steel tin packaging is being made increasingly lighter, which means the CO₂ footprint is further reduced. TS550 is the result of intensive cooperation with one of our European customers who produce so-called two-part aerosol cans (tin body and top). In 2021, using this very thin-rolled steel (150 microns) in the production of hair styling aerosol cans, we achieved a weight reduction of 11%. This means a considerable saving of material and as such the CO₂ footprint compared to the usual classic aerosol cans.



MagiZinc® 310 for solar panels

With MagiZinc® 310, Tata Steel is launching an innovative alternative to conventional galvanised steel. Thanks to the very good corrosion protection, it can extend the service life, even with a thinner zinc layer. This is important for, for example, the frames of solar panels, which must last at least 25 years. Furthermore, this means less use of the raw material zinc and a reduced impact on the environment.



Valast

During the year under review, we launched Valast, a wear-resistant steel grade for, for example, excavators. The ultra-hard steel means the machines last longer and have fewer downtimes.

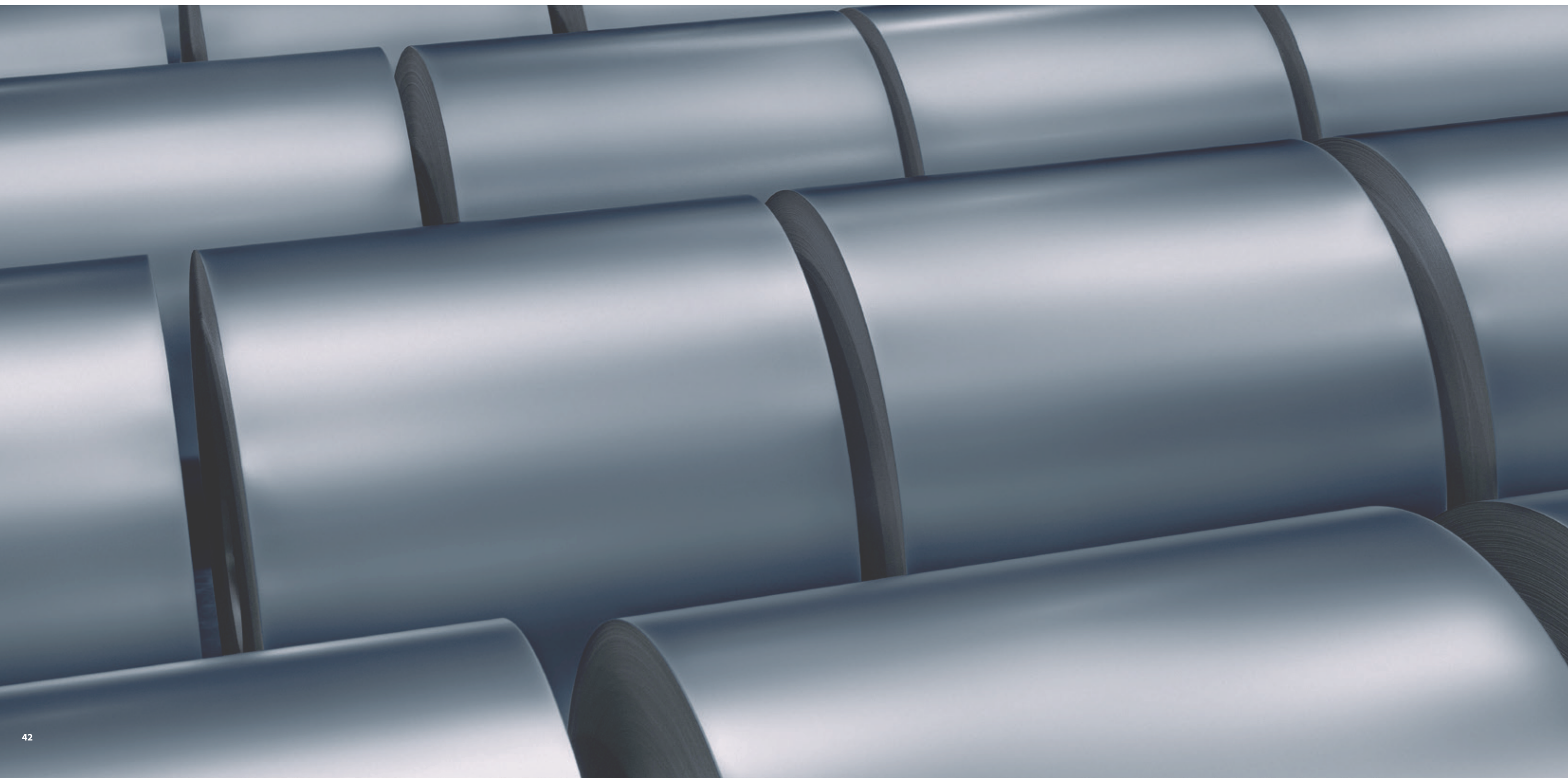


Water-based coating

Our tube plant in Oosterhout developed the technique with which Contiflo® pipes can be given a water-based anti-corrosion coating on the inside. The new coating is less harmful to man and the environment because the use of a zinc spray - which releases many volatile substances - becomes unnecessary. This innovation is the result of cooperation with Quaker Houghton. The tubes in question are used worldwide in, among other things, greenhouses for glasshouse horticulture.

6

ABOUT THIS REPORT



6.1 How we report

Against the background of developments in our society, from our local environment to those on a global level, Tata Steel is in the spotlight. This applies to our ambitions and plans, but certainly also to the performance and results in the field of sustainable, responsible and future-oriented business. Because we are aware of our position and role, and take our responsibility seriously, we account as transparently as possible, both publicly and through the appropriate channels to stakeholders such as our shareholders, customers, local residents and governments. This sustainability report informs them about our organisation and how we continue to create value in the long term. We use this to report on our non-financial performance.

Scope

In previous years, we published integrated annual reports at group level (Tata Steel Europe Limited). We also published a sustainability report on the Tata Steel Europe activities, which Tata Steel Nederland and Tata Steel UK form a part of. This sustainability report is the first from Tata Steel Nederland B.V. This company consists of Tata Steel IJmuiden (the steel company) and Tata Steel Downstream Europe (DE) excluding the activities that are not carried out within the subsidiaries of TSN. Tata Steel Nederland has a global network of (sales) offices; these are not part of the reporting process. Whenever we use 'Tata Steel' in this report, we refer to Tata Steel Nederland.

Financial results are shared at group level and this report can be seen as a local supplement. In its sustainability policy, Tata Steel broadly follows the policy established at group level and has also specifically tailored this to the local market. More information about international policy can be found at <https://www.tatasteel.com/sustainability/>

Reporting period and frequency

Tata Steel's financial year runs from 1 April to 31 March. This sustainability report therefore primarily covers the period from April 2021 to March 2022. Where necessary or where relevant for a good understanding, we also report on matters before or after the end of the reporting period.

Guideline

Every year, Tata Steel strives to improve its sustainability reporting, in line with the nature, risks and opportunities of the organisation. For this sustainability report, we have based ourselves as much as possible on the guidelines of the Global Reporting Initiative (GRI), the worldwide standard for sustainability reporting. GRI sets high standards for reporting quality. We have conformed as much as possible to the new GRI 2021 criteria and aim to report fully according to GRI 2021 in the future.

GRI is based on the principle of materiality and requires organisations to communicate their management approach on the material topics for the organisation. For example, we focus the report and report on topics that are important to stakeholders. The GRI Context Index with references is included in the appendix.

Tata Steel works with external institutions, NGOs, industry organisations and government agencies to conduct audits and assessments and identify priorities for improvement. We work with more than 30 different parties (government/NGO/business community) on sustainability-related assessments/audits including World Steel Association, ISO and EcoVadis. In addition, our policy is based on international treaties, including the United Nations Sustainable Development Goals.

Results and targets

The results for most of our material themes are presented in the appendix to the report. The report itself also contains results and objectives in the various chapters, where relevant. At the moment, not all results and objectives are available for Tata Steel Nederland as a whole. The footnotes of the key figures indicate the scope of the results. In the coming year, further efforts will be made to obtain a more complete picture of the objectives and results on the material themes in the 2022/2023 sustainability report.

Verification

No external audit has taken place for this report. Senior executives have been involved in this decision and we are pursuing external verification of future reports. All content was shared via a structured internal process and validated by substantive experts and managers bearing (final) responsibility (up to and including the Board of Directors).

Invitation to stakeholders and readers

Tata Steel is at the heart of society. We want to emphasise this in our policy and reporting. That is why we are happy to discuss the transition of future steel production with our stakeholders. Readers of the report who would like to participate in the discussion or who have comments and/or tips, are invited to contact us via <https://www.tatasteleurope.com/contact-us/general-enquiries>

Abbreviations and Glossary

AGM	General Meeting of Shareholders
CAO	Collective bargaining agreement
CAPEX	CAPital EXpenditures of investment expenditures
CCS	Carbon Capture and Storage
CEO	Chief Executive Officer
CFO	Chief Financial Officer
COD	Chemical Oxygen Demand. This value indicates the amount of oxygen that would be needed to (almost) completely oxidise all organic substances. This is a measure of the amount of organic matter in water and is often used to measure the amount of pollution.
COR	Central Works Council
CSR	Corporate Social Responsibility
CY	Calendar Year, running from 1 January to 31 December
DRI	Direct Reduced Iron
DSP	Direct Sheet Plant
eMJV	Electronic Environment Annual Report
EPD	Environmental Product Declaration
FY	Financial Year. At Tata Steel, the financial year runs from 1 April to 31 March the following year.
GHG	Green House Gas
GLEC	Global Logistics Emissions Council
GRI	Global Reporting Initiative
HSSE	Health, Safety, Security & Environment in IJmuiden
KPI	Key Performance Indicator
LTI	Lost-Time Injury
LTIFR	Lost-Time Injury Frequency Rate (LTIFR) shows the number of incidents that lead to absenteeism per million hours worked.
NGO	Non-governmental organisation
OESO	Organisation for Economic Cooperation and Development
PAH	Polycyclic aromatic hydrocarbons
RIVM	Dutch Institute of Public Health
RvB	Board of Directors
RvC	Supervisory Board
R&D	Research and Development
SER	Social and Economic Council
TRIFR	The Total Recordable Injury Frequency Rate (TRIFR) shows the number of medical treatments without absenteeism per million hours worked.
TSC	Tata Steel Chess Tournament
TSIJ	Tata Steel IJmuiden
TSN	Tata Steel Nederland
VROM	Housing, Spatial Planning and the Environment

This report contains forward-looking measures. These forward-looking measures may be affected by anticipated and unforeseen risks, uncertainties, unfulfilled preconditions and other significant circumstances, which means that actual results may differ in the future.

Tata Steel and its affiliates will under no circumstances be held liable for any damage or loss of any kind resulting from acts of use or reliance on the information contained in this report.

KEY FIGURES

TATA STEEL NEDERLAND BV

Key Performance Indicator	Units	FY19/20	FY20/21	FY21/22
Basis Informatie				
Crude Steel production	million tons	6.62	6.07	6.45
Liquid Steel production	million tons	6.78	6.21	6.61

Key Performance Indicator	Units	FY19/20	FY20/21	FY21/22
The environment				
CO₂ emissions (based on Worldsteel user guide V9.5) (3)				
CO ₂ eq. emissions - Total (ws Scope 1+2+3) (5,6)	million tons	11.62	10.77	11.48
CO ₂ emissions intensity (ws Scope 1+2+3) (5)	tons of CO ₂ /tons of crude steel	1.76	1.77	1.78
Greenhouse gasses (GHG)				
TSN absolute GHG emissions (for all entities) - (ws Scope 1)	million tons	11.82	10.88	11.55
TSN absolute GHG emissions (for all entities) - (ws Scope 2)	million tons	-0.13	-0.06	-0.10
TSN absolute GHG emissions (for all entities) - (ws Scope 3) (5)	million tons	0.16	0.17	0.27
TSN absolute GHG emissions (for all entities) - (ws Scope 1+2+3) (5)	million tons	11.85	11.00	11.72
TSN GHG emissions (for all entities) - (ws Scope 1+2+3) per conversion unit	kg CO ₂ /€ (Turnover)	2.52	2.53	1.70
Energy (3)				
Total electricity consumption (7)	PJ	7.50	7.50	7.87
Total self-generation of non-renewable electricity (8)	PJ	9.85	9.30	9.91
Total on-site renewable electricity generation	PJ			0.08
Total use of renewable electricity (including REGOs)	PJ	0	0	0
Renewable energy in relation to total electricity consumption	%	0	0	1
Energy intensity (5)	GJ/tons of crude steel	19.79	20.22	20.38
Raw materials				
Iron ore consumption for iron/steel production*	million tons	8.83	8.31	8.56
Specific iron ore consumption	tons/tons of crude steel	1.33	1.37	1.33
Coal and purchased coke consumption (including coking coal and injection)	million tons	4.19	3.91	4.06
Specific coal consumption	tons/tons of crude steel	0.63	0.64	0.63
Scrap consumption (internal and external)	million tons	1.15	1.02	1.14
Total raw material consumption (iron ore, scrap plus coal/coke)	million tons	14.2	13.2	13.8
Specific raw material consumption	tons/tons of crude steel	2.14	2.18	2.13
Management				
Share of TSN staff and contractors working at ISO14001-certified locations	%	96.16	96.47	97.31
Scrap recycling (3)				
Externally recycled steel	1,000 tons	640	566	670
Internally recycled steel	1,000 tons	511	453	468
Recycled steel - Total	1,000 tons	1,150	1,020	1,137
CO ₂ reduced by externally recycled steel (4)	1,000 tons	1,030	912	1,078
Recycling (3)				
Material reused by our process (excluding scrap)	1,000 tons	1,155	933	954
Volume of by-products sold (excluding granulated blast furnace slag (GBS))	1,000 tons	855	251	226
Slag to cement industry (i.e. GBS sales)	1,000 tons	1,285	1,110	1,239
Recycling (1)				
Volume of by-products sold (excluding granulated blast furnace slag (GBS))	1,000 tons	9.03	8.75	10.19
Expenditure on climate change and environment				
CAPEX Expenditure on climate change and the environment	£ million	48.35	51.01	33.52
Complaints (3)				
Environmental complaints	#	3,519	4,148	2,336
Complaints (1)				
Environmental complaints	#	2	2	0

Key Performance Indicator	Units	CY2019	CY2020	CY2021
The environment				
CO₂ emissions (audited EU ETS emissions) (3)				
CO ₂ eq. emissions (9)	million tons	6.35	5.79	5.96
CO ₂ emissions at Vattenfall from combustion of TSJ residual gases (9)	million tons	5.50	4.98	5.62
Air emissions (3)				
Dust	tons	1,881	1,801	1,569
Dust intensity	kg/tons of crude steel	0.28	0.30	0.24
NOx (Nitrogen Oxides)	tons	6,034	5,132	5,349
NOx (Nitrogen Oxides) intensity	kg/tons of crude steel	0.91	0.85	0.80
SO ₂ (Sulphur dioxide)	tons	3,159	3,035	2,793
SO ₂ (Sulphur dioxide) intensity	kg/tons of crude steel	0.48	0.50	0.42
Air emissions (1)				
Dust	tons	1.23	1.04	0.19
NOx (Nitrogen Oxides)	tons	44.70	49.03	42.08
SO ₂ (Sulphur dioxide)	tons	0.86	0.90	0.74
Water (3)				
Water consumption	million m3	32.6	32.3	32.5
Specific water consumption	m3/tons of crude steel	4.93	5.20	4.76
Waste water discharge volume	million m3	194	185	204
Waste water discharge intensity	m3/tons of crude steel	29.0	30.4	30.6
Water (1)				
Water consumption	million m3	0.834	0.821	0.802
Waste (3)				
Waste	1,000 tons	218	201	170
Waste - material reused, recycled by third parties	1,000 tons	170	159	127
Waste - material sent to landfills	1,000 tons	42	36	38
Waste (1)				
Waste	1,000 tons	11.86	11.54	12.19
Waste - material reused, recycled by third parties	1,000 tons	9.16	8.01	12.26
Waste - material sent to landfills	1,000 tons	0.16	0.18	0.25
Emissions into water (3)				
Mass emissions into water, hydrocarbons	tons	1.4	1.7	1.1
Mass emissions into water, suspended solids	tons	285	302	203
Mass emissions into water, COD	tons	557	584	532
Emissions into water (1)				
Mass emissions into water, hydrocarbons	tons	0.279	0.114	0.400
Mass emissions into water, suspended solids	tons	0.69	0.79	0.84
Mass emissions into water, COD	tons	2.32	2.53	2.99

(1) Downstream Europe

(3) Production site IJmuiden

(4) The CO₂ saved from the recycling of external steel scrap (i.e. steel products recovered at their end-of-life) is based on a calculation of the avoided emissions related to the making of an equivalent amount of iron from virgin ore via the blast furnace route

(5) Total (scope 1+2+3): based on Worldsteel methodology, including credits for the supply of slag to the cement industry.

(6) Worldsteel Scope 1+2+3 for IJmuiden in FY22 (1.78 t CO₂/tcs). Scope 1 includes the direct emissions of the site IJmuiden and the emissions resulting from the combustion of our waste gases at Vattenfall (comparable to ETS, 1.77 t CO₂/tcs in FY22). Scope 2 includes the emissions related to purchase of heat and electricity (for IJmuiden a credit of -0.03 t CO₂/tcs due to the surplus of electricity). Scope 3 includes a limited set of upstream emissions related to the production of purchased raw materials (coke, pellet DRI, etc, 0.07 t CO₂/tcs) and for the production of purchased argon, oxygen, nitrogen and hydrogen (0.07 t CO₂/tcs) and is reduced with credits for the use of our granulated blast furnace slag by the cement industry (-0.10 CO₂/tcs). The scope 3 of worldsteel does not include emissions related to mining and transport of raw material to the site nor transport of products from our site to our customers.

(7) Excludes power used by external companies located on the site IJmuiden.

(8) Includes power generated by Vattenfall from our waste gasses.

(9) Direct emissions scope 1: formal and audited emissions according ETS. These figures relate to calendar years.

* For this indicator, iron includes fines, purchase pellets and debris.

KEY FIGURES

TATA STEEL NEDERLAND BV

Key Performance Indicator	Units	FY19/20	FY20/21	FY21/22
Social				
Safety				
Fatalities - Employees	#	0	0	0
Fatalities - Contractor personnel	#	0	0	0
Fatalities - Total	#	0	0	0
Lost-Time Injury (LTI) - Employees	#	18	17	19
Lost-Time Injury (LTI) - Contractor personnel	#	13	9	8
Lost-Time Injury (LTI) - Total	#	31	26	27
Lost-Time Injury Frequency Rate - Employees	Index	0.99	0.93	1.01
Lost-Time Injury Frequency Rate - Contractor personnel	Index	3.31	2.81	2.36
Lost-Time Injury Frequency Rate - Total	Index	1.40	1.21	1.21
Recordables - Employees	#	71	71	74
Recordables - Contractor personnel	#	46	36	41
Recordables - Total	#	117	107	115
Total Recordable Injury Frequency Rate Employees	Index	3.90	3.88	3.93
Total Recordable Injury Frequency Rate Contractor personnel	Index	11.68	11.20	12.10
Total Recordable Injury Frequency Rate - Total	Index	5.26	4.97	5.17
Sites with ISO45001	#	6	7	9
Sites with ISO45001 as a percentage of all TSN sites	%	24	28	36

(3) Production site IJmuiden

Key Performance Indicator	Units	FY19/20	FY20/21	FY21/22
Social				
Human Resources Management				
Number of employees	#	11,669	11,480	11,608
Number of female employees	#	1,284	1,252	1,249
Percentage of female employees	%	11.0	10.9	10.8
Number of permanent employees by gender	#M/#F	9999/1214	9853/1198	9777/1188
Number of agency employees by gender	#M/#F	386/70	375/54	582/61
Number of full-time employees by gender	#M/#F	9359/659	9216/656	9315/654
Number of part-time employees by gender	#M/#F	1021/624	1012/596	1044/595
Number of new employees by gender	#M/#F/#not recorded	404/59/0	372/39/0	523/46/46
New female employees as a percentage of the total	%	12.7	9.4	7.5
Total labour costs	£ million	1,017	1,008	1,170
Number of retirements	#			104
Staff turnover	%	2.2	2.8	3.1
Turnover of female employees	%	3.5	3.5	4.9
Average age	#	46.3	46.2	45.9
Employees aged over 50 (i.e. 51 and above)	#	5,332	5,212	5,138
Employees aged between 30 and 50 (i.e. 30-50)	#	4,849	4,840	4,945
Employees under the age of 30 (i.e. 29 and under)	#	1,476	1,428	1,525
Age distribution of the workforce (>50)	%	46	45	44
Age distribution of the workforce (30-50)	%	42	42	43
Age distribution of the workforce (<30)	%	13	13	13
Percentage of female managers	%	8.6	8.3	8
Percentage of female TSN board members	%			14
Employees who are members of a trade union (3)	#	4,339	4,759	4,585
Percentage of employees who are members of a union (3)	%	48.4	54.3	51.6
Percentage of employees who are covered by a collective agreement (3)	%	98.0	98.0	98.1
Number of hours of training (3)	hours	94,524	49,235	78,836
Number of hours of training per employee (3)	hours/employee	10.0	5.0	8
Organisational Health Index	#	n/a	n/a	n/a
% of staff that have had performance reviews (3)	%	88.1	88.5	will follow
Sickness absence rate	%	4.85	4.80	5.39

KEY FIGURES

TATA STEEL NEDERLAND BV

Key Performance Indicator	Units	FY19/20	FY20/21	FY21/22
Economics & Governance				
Financial				
Gross turnover	€ million	4709	4347	6904
Ethics (2)				
Whistleblower reports - Received in year	#	51	48	34
Whistleblower reports - Closed during the year	#	51	48	34
Ethics training or Tata Code of Conduct - number of persons	#	180	135	105
Supply chain				
Active suppliers	#	3,462	3,129	3,329
Active suppliers made aware of Responsible Purchasing Policy	%	88	90	91
Intellectual capital				
Patents granted	#	133	142	202
Patents filed	#	36	19	15
Cooperation/memberships of academic and technical institutes	#			158
R&D expenditure	€ million	57	54	62
R&D expenditure - % of turnover	%	1.20	1.24	0.90
New products developed and launched	#	20	12	10
Share of new products assessed with sustainability assessment tool	%	100	100	100
R&D employees	FTEs	311	300	299
Investment in new processes and products: CAPEX	€ million	111	64	73
Investment in new processes and products: CAPEX, % of turnover	%	2.36	1.47	1.06
Community (3)				
Number of applications received for financial or in-kind support	#	69	24	30
Number of approved applications for financial or in-kind support	#	23	17	24
Number of youngsters attending Tata Kids of Steel events	#	3,090	1,363	4,683
Number of Tata Kids of Steel events	#	6	2	6
Number of events	#	25	13	59
CSR expenditure	€ million	0	0	0.16
Legal (3)				
Cases for which fines have been imposed	#	4	4	1
Cases for which non-monetary sanctions have been imposed	#	1	6	6
Fines for cases of non-compliance	€	228,037	87,625	302,000

(2) Tata Steel Europe

(3) Production IJmuiden

Tata Steel Nederland GRI Content Index – Core

GRI 2: General Disclosures

Standards	Disclosure	Reference
GRI 2: General Disclosures		
1. The organization and its reporting practices		
2-1	Organisational details	Chapter 1 - Tata Steel Nederland, Priorities & Governance
2-2	Entities included in the organisation's sustainability reporting	Chapter 1 - Tata Steel Nederland, Priorities & Governance Chapter 6 - About this report - 6.1 How we report
2-3	Reporting period, frequency and point of contact	Chapter 6 - About this report - 6.1 How we report
2-4	Restatements of information	Chapter 6 - About this report - 6.1 How we report
2-5	External assurance	Chapter 6 - About this report - 6.1 How we report
2. Activities and workers		
2-6	Activities, value chain and other business relationships	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.1 Tata Steel Nederland
2-7	Employees	- Key figures - Social - Human Resources
2-8	Workers who are not employees	Chapter 4 - People & Society - 4.2 Safety: Safety Centre - 4.2 Safety: IJmond Safety platform - Key figures - Social – Human Resources Management
3. Governance		
2-9	Governance structure and composition	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Connect, change & care: basis of governance
2-10	Nomination and selection of the highest governance body	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance
2-11	Chair of the highest governance body	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Connect, change & care: basis of governance
2-12	Role of the highest governance body in overseeing the management of impacts	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Supervision of sustainability
2-13	Delegation of responsibility for managing impacts	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Supervision of sustainability
2-14	Role of the highest governance body in sustainability reporting	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Supervision of sustainability
2-15	Conflicts of interest	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Supervision of sustainability
2-16	Communication of critical concerns	- Key figures - Economics & Governance: Ethics
2-17	Collective knowledge of the highest governance body	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Connect, change & care: basis of governance
2-18	Evaluation of the performance of the highest governance body	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Connect, change & care: basis of governance
2-19	Remuneration policies	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance
2-20	Process to determine remuneration	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance
2-21	Annual total compensation ratio	Comment: Data regarding 2-21 is not included in the 2021/2022 annual report. The upcoming reporting cycle will assess whether the information is available for the 2022/2023 annual report.

Standards	Disclosure	Reference
GRI 2: General Disclosures		
4. Strategy, policies and practices		
2-22	Statement on sustainable development strategy	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.3: Sustainability strategy
2-23	Policy commitments	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance: Tata Code of Conduct
2-24	Embedding policy commitments -	Key figures: - Economics & Governance: Ethics
2-25	Processes to remediate negative impacts	Chapter 2 - Environment & Community - 2.3 External study & action taken - 2.4 Sustainable relationship with the community
2-26	Mechanisms for seeking advice and raising concerns	Chapter 2 - Environment & Community - 2.3 External study & action taken - 2.4 Sustainable relationship with the community
2-27	Compliance with laws and regulations	- Key figures: - Economics & Governance: Legal
2-28	Membership associations	Chapter 5 - Customers & Value - 5.1 Customers & networks: Other Networks
5. Stakeholder engagement		
2-29	Approach to stakeholder engagement	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.4 Stakeholders
2-30	Collective bargaining agreements	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.4 Stakeholders: Employee representation - Key figures: - Social: Human Resources Management
GRI 3: Material topics		
3-1	Process to determine material topics	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.3 Sustainability strategy: Materiality analysis
3-2	List of material topics	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.3 Sustainability strategy: Results material themes

Tata Steel Nederland GRI Content Index – Core

Topic Specific Standards

Standards Topic Specific Standards	Disclosure	Reference
Material topic: Health & Safety of employees		
3-3	Management of material topics	Chapter 4 - People & Society - 4.2 Safety - 4.3 Health and fitness
Own indicator	Number of fatalities, lost-time accidents and recordables	Chapter 4 - People & Society - 4.2 Safety: Health and safety figures
Own indicator	Percentage of sickness absence	Chapter 4 - People & Society - 4.2 Safety: Health and safety figures
Material topic: Local environment		
3-3	Management of material topics	Chapter 2 - Environment & Community
Own indicator	Reduction of lead, particulate matter, heavy metals, dust deposition, nitrogen oxides, odour impact and PAH emissions	Chapter 2 - Environment & Community - 2.1 Impact on the immediate living environment: additional measures for noticeable improvements
Material topic: Circularity		
3-3	Management of material topics	Chapter 3 - Carbon Reduction & Sustainability - 3.8 Raw materials efficiency
Own indicator	Material reused by our process (excluding scrap) and by third parties	Chapter 3 - Carbon Reduction & Sustainability - 3.8 Raw materials efficiency: Tata Steel IJmuiden Waste - Key figures - Environment: Recycling - Environment: Waste
Own indicator	Volume of by-products sold (excluding granulated blast furnace slag (GBS))	- Key figures - Environment: Recycling
Own indicator	Slag to cement industry (i.e. GBS sales)	- Key figures - Environment: Recycling
Material topic: Responsible purchasing		
3-3	Management of material topics	Chapter 3 - Carbon Reduction & Sustainability - 3.9 Responsible purchasing
Own indicator	Active suppliers made aware of Responsible Purchasing Policy	- Key figures - Economics & Governance: Supply Chain
Material topic: Carbon reduction (GRI 305: EMISSIONS 2016)		
305	Management of material topics	Chapter 3 - Carbon Reduction & Sustainability
305-1	TSN absolute GHG emissions (for all entities) - (ws Scope 1)	- Chapter 3 - Carbon Reduction & Sustainability - 3.1 Current CO ₂ footprint - Key figures - Environment: Greenhouse gases (GHG)
305-2	TSN absolute GHG emissions (for all entities) - (ws Scope 2)	Chapter 3 - Carbon Reduction & Sustainability - 3.1 Current CO ₂ footprint - Key figures - Environment: Greenhouse gases (GHG)
305-3	TSN absolute GHG emissions (for all entities) - (ws Scope 3)	Chapter 3 - Carbon Reduction & Sustainability - 3.1 Current CO ₂ footprint - Key figures - Environment: Greenhouse gases (GHG)
305-4	CO ₂ emissions intensity (ws Scope 1+2+3)	Chapter 3 - Carbon Reduction & Sustainability - 3.1 Current CO ₂ footprint - Key figures - Environment: Greenhouse gases (GHG)
305-5	TSN absolute GHG emissions (for all entities) (ws Scope 1+2+3)	- Key figures - Environment: Greenhouse gases (GHG)
305-7	NOx (Nitrogen Oxides) & SO ₂ (Sulphur dioxide)	- Key figures - Environment: Air emissions

Standards Topic Specific Standards	Disclosure	Reference
Material topic: Long-term profitability		
3-3	Management of material topics	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.1 Tata Steel Nederland
Own indicator	Gross turnover	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.1 Tata Steel Nederland - Key figures - Economics & Governance: Financial
Own indicator	Investments in installations	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.1 Tata Steel Nederland
Material topic: Equal opportunities		
3-3	Management of material topics	Chapter 4 - People & Society - 4.4 Equal opportunities
Own indicator	Percentage of employees that experience an inclusive work climate	Chapter 4 - People & Society - 4.4 Equal Opportunities: Diversity and Inclusion Programme Tata Steel IJmuiden
Own indicator	Ethnic and cultural diversity in all job groups	Chapter 4 - People & Society - 4.4 Equal Opportunities: Diversity and Inclusion Programme Tata Steel IJmuiden
Own indicator	Number of women in technical vocational positions	Chapter 4 - People & Society - 4.4 Equal Opportunities: Diversity and Inclusion Programme Tata Steel IJmuiden
Own indicator	Number of women in decision-making positions	Chapter 4 - People & Society - 4.4 Equal Opportunities: Diversity and Inclusion Programme Tata Steel IJmuiden
Material topic: Involving customers in sustainability		
3-3	Management of material topics	Chapter 5 - Future-proofing - 5.3 Customers & networks
Own indicator	Number of work sessions with suppliers and customers on sustainability	- Chapter 5 - Future-proofing - 5.3 Customers & networks
Own indicator	Number of trade association memberships	Chapter 5 - Future-proofing - 5.3 Customers & networks: Other networks
Material topic: Governance & engagement		
3-3	Management of material topics	Chapter 1 - Tata Steel Nederland, Priorities & Governance - 1.5 Governance
Own indicator	Number of cases for which fines or non-monetary sanctions have been imposed	- Key figures - Economics & Governance: Legal
Material topic: Quality & Innovation		
3-3	Management of material topics	Chapter 5 - Customers & Value - 5.1 Investing in the future
Own indicator	R&D investment	Chapter 5 - Customers & Value - 5.1 Investing in the future: Key figures innovation - Key figures - Economics & Governance: Intellectual capital
Own indicator	Investment in new processes and products: CAPEX	- Key figures - Economics & Governance: Intellectual capital