

**TATA STEEL**



**Tata Steel in Europe  
Sustainability Report  
2019/2020**



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## A responsible employer

We strive to fully achieve the Vision of Tata Steel to be inclusive as an employer of choice. This will be achieved through the work we undertake with our Leaders, our Recruitment, Selection and Retention processes, the working environment we create and sustain and a flexible employment framework. We are investing time and effort in implementing more inclusive ways of working with leaders supporting their teams by trusting, empowering and coaching them to succeed while ensuring that transparent metrics and accountability are increased. These approaches will ensure that our employees can strive for the highest professional and technical standards and contribute to our sustainability goals.

# Shaping a sustainable society for generations to come

Tata Steel is building a leading European steel business which is sustainable in every sense. Every day our 20,000+ employees make a difference: creating added value in ever-closer partnerships with customers while enjoying working, innovating, sharing and learning together.

We aim to play a positive role in shaping a sustainable society for generations to come. In order to achieve this, we are focusing on three main pillars: to be leading in CO<sub>2</sub> neutral steel production, being a responsible steel supplier and enabling our customers to become more sustainable.



# A mission for the world

The world's sustainability challenges can only be overcome within an international framework of interconnected efforts. This is why our strategy aligns with the United Nations' Sustainable Development goals.

## Henrik Adam, CEO Tata Steel in Europe:

"Being a success means working with others in partnership. This helps us improve our operations and helps our customers reach their sustainability goals. It also allows us to work with others towards our own goal of CO<sub>2</sub> neutral steelmaking."

"Part of this is by increasing our efficiency. Making sure we use raw materials wisely while also getting as much value as possible from our by-products. In the market our products help set us apart and we are always looking for ways to make them lighter, stronger and more durable. This is what helps our customers too."



### Responsible Steel

Tata Steel has joined forces with global steel-making standards organisation ResponsibleSteel™, giving customers and consumers even more confidence, we are committed to reducing greenhouse gas emissions as well as creating jobs and protecting communities. All of Tata Steel's operations in 26 countries have signed up to ResponsibleSteel™, the industry's first globally-present standards and certification scheme.



### Biodiversity

Over the next seven years, we will be reducing the footprint of our site at Shapfell in the UK by removing obsolete buildings and reducing the recycling storage area. We have begun a programme of tree-planting to improve the visual screening and increase biodiversity, with around 1,000 native deciduous and coniferous trees planted so far and an aim to plant 3,000 in total. Grassed areas have been left uncut to encourage wildflowers to self-seed.



The United Nations has a number of Sustainable Development goals and we have designed our sustainability strategy around the six we can have the most impact on.

# Leading in CO<sub>2</sub> neutral steelmaking

Our ambition is to produce steel without CO<sub>2</sub> emissions by 2050 through investing in a mix of breakthrough technologies, such as carbon capture, utilisation and storage (CCUS), Hlsarna, and the use of hydrogen.

## Annemarie Manger, Director Sustainability, Health, Safety, Environment & Quality:

“Our roadmap to 2050 is a long one, but it is clear and specific. Our unique steelmaking locations in the Netherlands and the UK provide us with the opportunity, together with our partners, to achieve this vision. Together we will pave the way with a mix of technologies to ensure future generations will be able to work and live in safe and sustainable places.”



### Zero carbon logistics

Our zero-carbon logistics framework is helping to reduce supply chain emissions for ourselves and our customers, by focusing on network and modal optimisations, fleet efficiency improvements, alternative fuels and packaging improvements.

# KEY DATA 2020

## TATA STEEL IN EUROPE

### PEOPLE

**20,000**

employees globally working for Tata Steel in Europe in safe conditions, with good pay and high levels of training.



**10%**

the proportion of women in our workforce – a ratio we are striving to increase.\*



### PRODUCTS

**100%**

the proportion of all new products developed in FY20 scrutinised by our award-winning sustainability assessment tool.



**77%**

the proportion of the new products we launched in FY20 that make a more positive contribution to sustainable development than the products they replace.



\* Our vision is to be an inclusive employer of choice, achieved through our leaders, and our recruitment, selection and retention processes, our working environment and flexible employment. We are implementing more inclusive ways of working, while ensuring that transparent metrics and accountability are increased, so we can realise the full potential of all employees.

\*\* Calculated with the methodology set by worldsteel and weighted for IJmuiden and Port Talbot.

\*\*\* Based on the worldsteel CO<sub>2</sub> benchmark, report 2019 compared with report 2009. Worldsteel awarded us a Climate Action certificate in recognition of our long-term participation in its CO<sub>2</sub> benchmark.

### PLANET

**30%**

our target on the reduction of CO<sub>2</sub> emissions before 2030.



**20 million**

tonnes of CO<sub>2</sub> emissions each year, including emissions from electricity generation for our sites.

**10%**

the reduction, since 1990, of our specific CO<sub>2</sub> emissions per tonne of steel.\*\*

**5%**

the reduction in our specific emissions. The world average for comparable companies showed a slight increase of 3%.\*\*\*

**2050**

when we aim to be a CO<sub>2</sub> neutral steelmaker.



### PROSPERITY

**>£8 billion**

our annual turnover, which we use to invest in our processes and to develop innovative and sustainable products and services, contributing to prosperity of our employees, our supply chain and our surrounding communities.



# Enabling our customers to become more sustainable

Our customers count on our expertise to help them improve the sustainability of their value chains and create the sustainable products society needs.



- Using life cycle assessment, we give our customers an in-depth insight into our products' environmental characteristics, so they can use them optimally in their own sustainable products.
- We are the only steel company in the world that operates its own Environmental Product Declaration (EPD) programme. An EPD is a standardized document informing about a product's potential environmental and human health impact.
- Since 2018, we have used our new product development sustainability assessment tool to identify the sustainability benefits of all our new products. For this innovative approach,

Tata Steel was awarded a worldsteel 'Steelie' award for Excellence in Life Cycle Assessment in 2019.

- Our range of advanced high strength steels for the **automotive sector** helps to reduce the weight of vehicles, increasing their energy efficiency while retaining their safety.
- Our range of innovative solutions such as Protact® helps our **packaging customers** improve their sustainable footprint.
- In **construction** we have the widest portfolio of products certified as responsibly sourced in the world. For this industry we develop technologies for modular and sustainable construction.
- We **enable energy** reduction for example through our high-reflective Colorcoat® coatings, high performance sandwich panels and our airtight joint design.
- We partner with our **engineering customers** to optimise their use of advanced steel, such as Valast® 450, to manufacture efficient products which generate a lower CO<sub>2</sub> footprint.
- We are phasing out the use of hazardous substances in our production processes by innovating in new products, like TCCT®.

## Regenerative thermal oxidiser

We invested €3m in a new finish section incinerator on coating line no 2 at our site in Maubeuge, France. We replaced the original incinerator, which had significant natural gas consumption and associated CO<sub>2</sub> emissions, with new energy-efficient RTO technology. The move has reduced CO<sub>2</sub> emissions by 2,920 tonnes in its first six months.

## Examples of our sustainable solutions

**Protact®** is a permanent coating that is 100% recyclable with no loss of quality.

**Colorcoat Prisma®** is a pre-finished steel with a 40-year Confidex Sustain Guarantee available, developed for the extended performance and aesthetics in the building.

**TCCT®** is the sustainable, reliable replacement for traditional tin-free packaging steel.

**Valast® 450** is longer lasting and stronger than structural steel for lighter, fuel-efficient heavy vehicles, with an extended operational life and reduced maintenance.

# Circularity of steel

Steel is the world's most recycled material. The high recycling rate for steel products is due to the ease of recovering and collecting them at the end of their life, thanks to their inherent magnetic properties.



- Globally, the average recycling rate for steel in construction is estimated to be 85% (1) and a study in the UK found that the average reuse and recycling rate for steel construction products is 96%. (2)
- In the packaging sector, the European average recycling rate stands at 82.5% and in the Netherlands, this has now reached 94.8%. (3)
- In automotive, the combined recovery and recycling rate for steel in vehicles is about 90%. (1)
- The average life of steel products is around 40 years. It can take a wide range of time for them to return to recycling, from a few weeks in the case of steel cans, to 15-20 years for vehicles. And infrastructure and buildings can last up to 100 years or more.

### References

- (1) worldsteel – <https://www.worldsteel.org/about-steel/product-sustainability.html>
- (2) Tata Steel/EUROFER Survey of member of the National Federation of Demolition Contractors (NFDC) – [https://www.steelconstruction.info/The\\_recycling\\_and\\_reuse\\_survey](https://www.steelconstruction.info/The_recycling_and_reuse_survey)
- (3) APEAL, Steel packaging hits a new recycling milestone 82.5%, April 2020 – <https://www.apeal.org/news/steel-packaging-hits-a-new-recycling-milestone-of-82-5/>

Today's demand for steel is far greater than the availability of steel scrap. This means we still need to produce new steel to cater for the needs of an ever-increasing global population. We have a diverse portfolio of decarbonisation innovations that focuses on producing the quality steel the market needs, while also increasing the recycled content.

## Energy Efficiency Wave Programme

Our Energy Efficiency (EE) Wave programme has been rolled out across the company, raising awareness about energy use and CO<sub>2</sub> efficiency, and engaging the whole workforce in identifying savings measures. A 12-week EE Wave at our Tubes site in Maastricht identified a 15% reduction in energy consumption at the site, thanks to the involvement of the whole workforce.

# Being a responsible steel supplier

We recognise that our responsibility extends beyond the processes that we directly control.

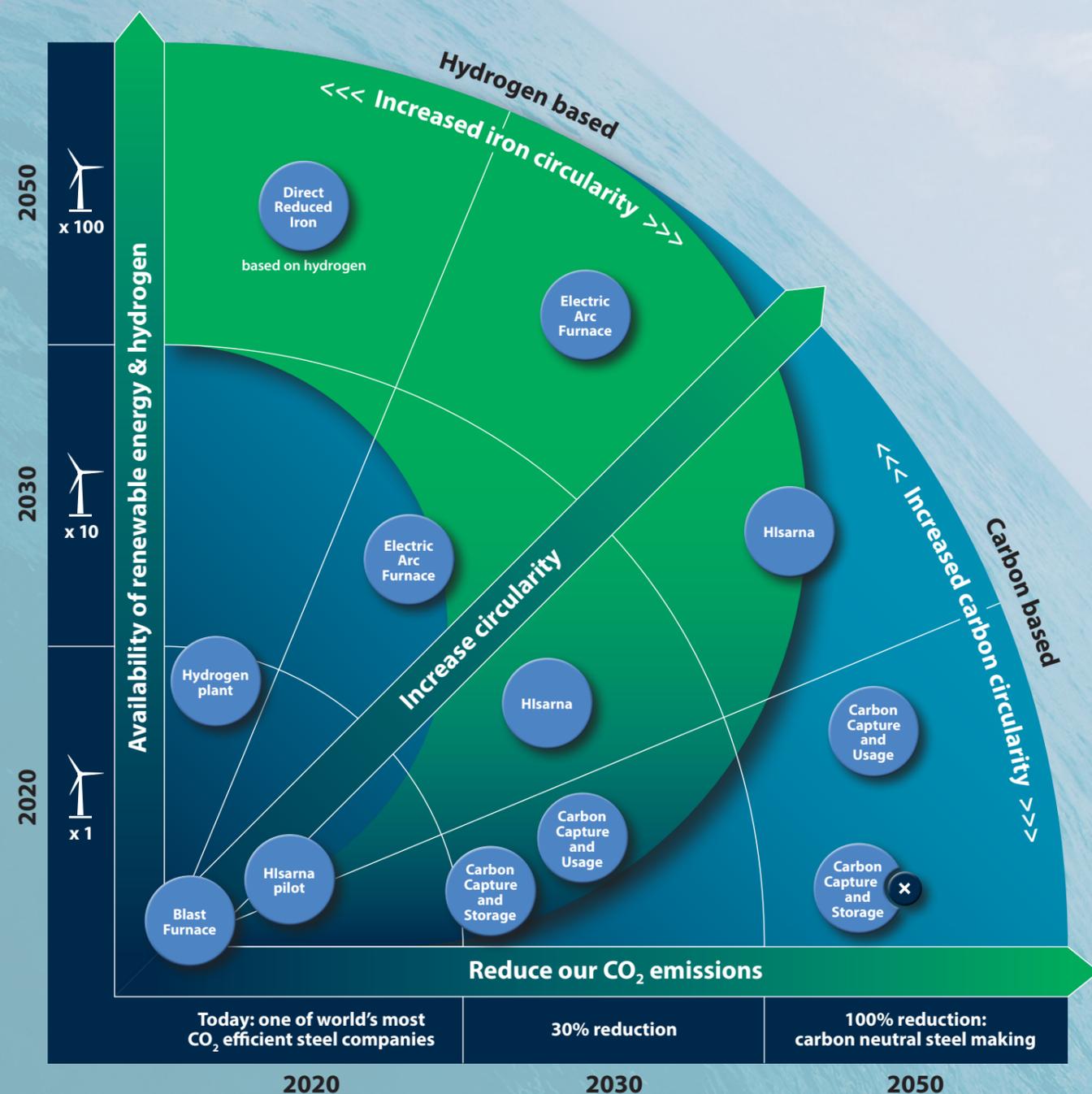
We also have to manage risks in our supply chain and be responsible for the stewardship of the products we supply. We carry out environmental, social and governance due diligence in our raw material procurement process and operate according to a responsible procurement policy, which covers health &

safety; fair business practices; environmental protection; human rights and local community development. All the products we manufacture in the Netherlands and the UK are independently certified as meeting the requirements of the responsible sourcing standard, BES6001.

Tata Steel Group has been identified as a global leader in engaging with suppliers on climate change - ranking in the top 3% of organisations on the CDP1 supplier engagement leaderboard.

Footnote: CDP is a not-for-profit charity which runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

# Vision map of Tata Steel in Europe: towards carbon neutral steelmaking



## A portfolio of innovations to reduce our CO<sub>2</sub> emissions significantly

This map shows our European route toward carbon-neutral steelmaking in 2050. The race is on to fundamentally change our core processes. It requires partnering with other industries, political support, developing breakthrough technologies, and new infrastructure.

### Carbon Capture Usage and Storage (CCUS)

We need to reduce our CO<sub>2</sub> emissions as quickly and effectively as possible. Therefore we want to build a plant which captures the carbon dioxide we currently emit. This can be offered to a new to build network to transport it for storage in empty gas fields under the North Sea. By 2027, this can reduce CO<sub>2</sub> emissions by three million tonnes. We plan to cut a further million tonnes of CO<sub>2</sub> through removing and converting more of our waste gases into useful products such as hydrogen, methanol or naphtha.

challenge. It needs a lot of energy, and it is crucial that this is as renewable as possible.

### Direct Reduced Iron (DRI)

DRI technology is an alternative iron production method. This technology already exists and uses natural gas. With an estimated development time of 15-25 years, the technology can be converted to operate on hydrogen. Furthermore, it depends on large quantities of hydrogen produced with renewable electricity which will become available not before 2030's.

### Hisarna

Hisarna, a radical new technology for making iron, has been in development since 2011. By 2033, our ambition is to have it scaled up it at full scale and it is ready to replace one of our blast furnaces. Hisarna can cut up to 100% of CO<sub>2</sub> emissions, when combined with carbon capture. In combination with an Electric Arc Furnace, It is also possible to recover zinc - often found in scrap - for reuse.

### Electric Arc Furnace

The demand for steel is far greater than the availability of steel scrap, which means we still need to produce new steel to cater to the needs of an ever-growing global population. As the availability of steel scrap and electricity from renewable sources is growing, Electric Arc Furnace technology has strong future potential.

### Increase circularity

Building our recycling capabilities to preserve metallic coatings, preserve alloying elements, reduce our emissions and recycle carbon and iron.

### Hydrogen plant

Together with partners, we are working to introduce hydrogen as a fuel source to help creating a hydrogen infrastructure. When burned, hydrogen emits only water. Producing hydrogen in large enough quantities is a

# Tata Steel in IJmuiden

We recognise that leading the way to a sustainable future means taking responsibility for viable employment, for the communities close to our premises and for the environment.

There are huge challenges ahead. With the ambition to become a carbon-neutral steelmaker by 2050, we have already developed firm plans to reduce our CO<sub>2</sub> emission drastically. At the same time, we want to remain an attractive employer and equip our employees with the skills they need to implement these changes, all the while continuing to benefit the communities which surround us.



## Hans van den Berg, Hub Director, Netherlands:

“A world without steel is unthinkable. In recent years we have invested heavily in upgrading our installations, so we can produce even better advanced steel grades that enable our customers to make their products more sustainable. Think of lightweight cars that emit less CO<sub>2</sub>, or batteries for electric transport. We are also investing to reduce the nuisance for our environment. This is how we contribute to a greener world.”

## CO<sub>2</sub> emissions

Our IJmuiden site in the Netherlands has the potential to reduce its CO<sub>2</sub> emissions by approximately four million tonnes by 2030 – approximately 30% of current emissions. With a direct connection to the North Sea, the area offers opportunities for the creation of a CO<sub>2</sub> transportation and storage infrastructure by 2030. Our plans are based on a combination of currently available and new technologies, and we are working with a number of partners.

### Everest

We recently started the first phase of our Everest project to capture CO<sub>2</sub> from the blast furnaces in the relatively short term, and to transport it to former gas fields under the North Sea for storage. In the second phase, we will use blast furnace emissions for conversion into sustainable raw materials for the chemical industry and synthetic fuels. This project will be an important step towards CO<sub>2</sub> reductions by 2030.

### Athos

This project is connected to Everest and Hlsarna and examines the feasibility of carbon capture and storage under the North Sea as well as carbon usage. The project feasibility is now complete. The transport and storage system aspect of this project will build new infrastructure for the Amsterdam region, using existing infrastructure as much as possible. It will be owned and operated by a third party.

### Hlsarna

This is our innovative iron-making technology, wherein the pre-processing of ores and coal into sinter and pellets can be skipped. Its concentrated CO<sub>2</sub> off-gas is ideally suited to carbon capture and storage (CCS). It has many other unique benefits, such as eliminating the emissions of other pollutants such as nitrogen oxides and sulphur dioxide from the processes it replaces. Moreover, it can be a gamechanger as we move towards a more circular economy. Through the ReclaMet project, we are engaged to evaluate techniques for the recovery of valuable resources such as zinc from metal industry wastes using Hlsarna.

### H2ermes

Tata Steel, Nouryon and the Port of Amsterdam have started a feasibility study into building a 100MW green hydrogen plant in IJmuiden. This technology is likely to play an important role in hydrogen steelmaking solutions which will help us achieving our ambition.

### ReclaMet

This is a multi-partner collaboration to evaluate techniques for the recovery of valuable resources such as zinc from metal industry wastes.

## Health & environment

In IJmuiden, we have developed a robust roadmap to improve our local environmental performance between 2019 and 2030 by addressing the concerns of the surrounding community on areas such as dust, noise and odours.

We made significant improvements in reducing dust emissions in the first year of our programme, including finalising a new facility for processing iron residues, as well as paving unsealed roads on site. We also installed new spray poles on our raw material storage areas to reduce dust drift and we continue testing other ways of further reducing dust. We have taken other operational measures including lessening our locomotives' emergency signals. We are reducing odours by placing additional electronic 'noses' on our site to better trace their sources and we have also started a pilot project with the Province of North Holland to exchange data from various e-noses.

We are continuously testing new operational designs, amongst others a trial to reduce dust emissions during the tipping and excavation of slag from our steel converter process.



## Value to society

Our Future Generations community partnership programme strives to contribute to the social wellbeing of our local communities. We activate this through granting donations and organising community activities focused on education, environment, and health & wellbeing.

In the Netherlands, the programme consists of a donation programme and local sponsorships. A well-known example is the renown annual Tata Steel Chess Tournament which was established in 1937. Every January, world famous chess grandmasters as well as amateurs compete in the seaside town of Wijk aan Zee. The donation programme supports local initiatives which have a sustainable impact and includes various events for young people and cultural events.

Technology and innovation are central in the IJmuiden region. At our Academy and through Techport (a collaboration with schools, local and regional governments and companies) we are supporting the education of young people to prepare them for a future in engineering.



# Tata Steel in the United Kingdom

The UK's target to reach net zero emissions by 2050 became law in June 2019, making it the first among the G7 economies to set such a goal. The law puts clean growth at the heart of the UK's industrial strategy.

We support decarbonisation policies which will help industry contribute to this emissions target by developing carbon capture, usage and storage (CCUS), facilitating the growth of the hydrogen economy and incentivising investment in new technologies for carbon-neutral steelmaking.



**Martin Brunnock, Hub Director, Strip Products UK, Port Talbot:**

“Sustainability for me is about much more than our physical environment, it is a holistic approach to responsibly developing our communities, our society and our world. What we do and plan today will impact many future generations.”

“In the UK, we are the current guardians of a steel industry that has a long history, a rich heritage, a lively existence, and an exciting future. We are making steel products today that weren't invented 10 years ago: we're making products that help to generate renewable energy, products that sustain society's needs, and products that reduce humans' impact on the planet. And in doing all of that, we're using fewer resources and less energy to make steel, while utilising the latest technologies and supporting many thousands of families through rewarding and stable employment. And we won't stop there – we're embracing many technologies that will help us to achieve carbon neutrality in 2050, and we will welcome many people into our industry to help us get there quickly. There may be many unknowns, but we have the will, the spirit and the determination to make a better future with steel at its heart.”

## CO<sub>2</sub> emissions

South Wales is home to a number of energy-intensive industries, including our site at Port Talbot. We can only achieve our ambition to reach net zero emissions by 2050 by working together with regional and national stakeholders from the public and private sector. We are a leading player in the South Wales Industrial Cluster, which in April 2020 was awarded funding by Innovate UK, the government's innovation agency, to set out a roadmap and identify the best options for cost-effective decarbonisation of industry in the area. We are working together to evaluate the feasibility of developing shared infrastructure such as carbon capture and storage facilities and green hydrogen networks.

We are currently working on a number of projects, for example:

### RICE

This aims to test and examine whether CO<sub>2</sub> produced from heavy industrial processes can be used to make high value products and chemicals, using a range of carbon capture and utilisation (CCU) techniques.

### COZMOS

In this collaboration with Sheffield University's UK Centre for Carbon Dioxide Utilisation, we are applying life cycle assessment methodologies to understand the benefits associated with the adoption of a variety of CCU techniques.

## Health & environment

At our largest site in the UK, Port Talbot, we have developed a comprehensive roadmap for reducing the environmental impact of the site. This comprises a wide range of measures aimed at preventing the release of dust from stacks as well as the open sources of the site, such as stockpiles and roads. We are using a combination of techniques, from the application of suppressants to the optimisation and enhancement of dust containment, extraction and cleaning systems. This is all underpinned by an enhanced monitoring system across the site which enables us to identify and respond rapidly to any problems.

Health and safety continues to be the Group's first priority as it strives to achieve its ambition of being the benchmark for health and safety in the steel industry. Despite this there were two tragic fatal events in the year at Port Talbot. The first, at Eglwys Nunydd Reservoir on 5 September 2019, where a contractor died whilst undertaking works at the reservoir. The second, at the Hot Strip Mill on 25 September 2019, where a contractor had been undertaking maintenance work on the coil conveyor also died.

## Value to society

In the UK, Tata Steel partners with local sports clubs and organisations that work with young people, schools and community members to improve levels of activity, healthy eating, teamwork and behaviour.

The Tata Steel Richard Burton 10k race and fun run is a championship athletics race with a difference. Organised by Shaun Tobin, a team member at the steel & slab department in Port Talbot, in 2019 it raised over £25,000 (€ 29,000) for local charities and good causes.

Through our Women of Steel campaign, we have been challenging the perceptions of the industry as a traditionally male employer. Engaging with female engineers from across our South Wales sites, the month-long radio campaign culminated in a week of schools' roadshows.

A wider donation programme supports local sporting events, community appeals and wellbeing initiatives.



# KEY FIGURES

## TATA STEEL EUROPE

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>Performance</b>				
Turnover	billion €	7.9	8.0	7.1
Crude steel production	million tonnes	10.41	10.03	10.00
Liquid steel production	million tonnes	10.69	10.30	10.26
<b>Health and safety</b>				
Fatalities	#	1	0	2
Lost-time injury rate – total	per million hours worked	1.36	1.45	1.71
Lost-time injury rate – employee	per million hours worked	1.23	1.08	1.57
Lost-time injury rate – contractor	per million hours worked	1.83	2.71	2.28
Recordables (total)	#	188	224	197
Recordables (employees)	#	126	134	133
Recordables (contractors)	#	62	90	64
Sickness Absence Rate	%	4.46	4.48	3.59
<b>Governance, compliance and integrity</b>				
Anti-bribery and corruption	# of people trained	2,972	166	3
Competition law	# of people trained	2,851	177	947
Dawn raid	# of people trained	1,336	72	2
Export controls	# of people trained	1,279	56	1
<b>Climate change</b>				
Crude steel production	million tonnes	10.4	10.0	10.0
Steel recycled – Total	1,000 tonnes	1,643	1,671	1,674
External steel recycled	1,000 tonnes	783	779	757
Internal steel recycled	1,000 tonnes	860	892	890
CO <sub>2</sub> saved from external steel recycled (1)	1,000 tonnes	1,276	1,269	1,225
Energy intensity per tonne crude steel	GJ/tcs	21.2	21.2	21.0
CO <sub>2</sub> eq. emission - (audited EU ETS emissions) (2)	million tonnes	13.48	12.41	12.78
CO <sub>2</sub> eq. emissions - Total (ws scope 1+2+3) (3)	million tonnes	20.76	19.82	19.82
Carbon intensity in tonnes of CO <sub>2</sub> per tonne of crude steel	tonnes / tonne	1.99	1.98	1.98

1 The CO<sub>2</sub> 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. IJmuiden & Port Talbot only (weighted average).

2 Direct emissions scope 1: formal and audited emissions according ETS. These figures relate to calendar years (i.e. the figure in column FY 2017/2018 is for calendar year 2017 etc.) IJmuiden & Port Talbot only.

3 Total (scope 1+2+3): based on methodology of worldsteel, excluding credits for slag delivery to cement industry. IJmuiden & Port Talbot.

		Calendar Year 2017	Calendar Year 2018	Calendar Year 2019
<b>Resources, emissions and waste</b>				
Dust (PM)	tonnes	3,952	3,757	3,817
	kg/tcs	0.38	0.38	0.38
NO <sub>x</sub> (oxides of nitrogen)	tonnes	10,745	9,574	10,868
	kg/tcs	1.03	0.96	1.09
SO <sub>2</sub> (sulphur dioxide)	tonnes	10,426	10,190	10,249
	kg/tcs	1.00	1.03	1.02
Mass emissions to water, hydrocarbons	tonnes	40	67	67
Mass emissions to water, suspended solids	tonnes	1,011	1,839	1,815
Mass emissions to water, COD	tonnes	NA	NA	NA
Material re-used through our process (excluding scrap steel)	1,000 tonnes	1,522	1,459	1,455
Volume of by-products sold (excluding granulated blast furnace slag (GBS))	1,000 tonnes	1,815	1,533	1,414
Slag to cement industry (i.e. GBS sales)	1,000 tonnes	3,338	2,014	2,103
Waste generated	1,000 tonnes	407	513	458
Waste – material reused, recycled by third parties	1,000 tonnes	348	440	393
Waste – material disposed to landfill	1,000 tonnes	53	77	59
Fresh water consumption	m <sup>3</sup> /tonne (tcs)	4.79	5.29	5.43
	million m <sup>3</sup>	49.7	52.5	54.7
Environmental complaints	#	1,481	3,851	4,946

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>People</b>				
Number of employees	#	21,247	21,454	20,379
Number of new hires	#	1,855	1,850	1,079
Number of new hires by gender	#M/#F	1,586/269	1,591/259	901/178
Number of retirements	#	415	221	410
Average age	#	45	45	45
Employees over the age of 50	#	7,034	7,074	6,917
Total turnover rate	%	14.4	7.2	9.3
Percentage of female employees	%	11.1	11.1	11.2
Percentage managers that are female	%	16.9	18.1	18.2
Number of hours training per employee	hrs/employee	32.6	41.2	NA
Organisational Health Index (OHI) (1)	#	44	NA	NA
% of staff development appraisal	%	80	80	NA

1 The Organisational Health Index (OHI) measures nine elements of organisational effectiveness through an employer survey. The survey is undertaken every 2-3 years. In 2014/15 Tata Steel scored 51.

### Community

Amount of money invested through community partnership programme:				
Partnerships: Health and Education (1)	£	105,000	135,000	104,500
Tata Kids of Steel (health) (1)	£	18,000	18,000	17,000
Donations: health, education and environment (1)	£	75,000	80,000	80,000
Number of applications for financial or in-kind support received (2)	#	250	246	170
Number of applications for financial or in-kind support approved (2)	#	79	80	77
Number of youngsters attending Tata Kids of Steel events: (2)	#	4,080	4,400	5,890
Number of Tata Kids of Steel events: (2)	#	2	10	9

1 These data are for TSE as a whole

2 These data are the sum of TSUK and TSN

### Products (1)

Proportion of NPD assessed with sustainability assessment tool (2)	%	-	100%	100%
Number of NPD (2)	#	-	19	22
Number of eco-products	#	-	9	15
Number of eco-premium products	#	-	3	2
Proportion of NPD that are eco & eco-premium (2)	%	-	63%	77%

1 These data are for TSE as a whole

2 NPD = New Product Development

# KEY FIGURES

## THE NETHERLANDS

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>Performance</b>				
Crude steel production	million tonnes	6.90	6.90	6.62
Liquid steel production	million tonnes	7.08	7.08	6.78
<b>Health and safety (1)</b>				
Fatalities	#	0	0	0
Lost-time injury rate – total	per million hours worked	1.22	1.58	1.40
Lost-time injury rate – employee	per million hours worked	0.93	0.98	0.99
Lost-time injury rate – contractor	per million hours worked	2.13	3.43	3.34
Recordables (total)	#	105	105	117
Recordables (employees)	#	67	47	71
Recordables (contractors)	#	38	58	46
Sickness Absence Rate	%	4.9	4.7	3.28
1 Primary steelmaking, IJmuiden production site				
<b>Climate change (3)</b>				
Crude steel production	million tonnes	6.90	6.90	6.62
Steel recycled – Total	1,000 tonnes	1,095	1,140	1,150
External steel recycled	1,000 tonnes	515	519	640
Internal steel recycled	1,000 tonnes	580	621	511
CO <sub>2</sub> saved from external steel recycled (4)	1,000 tonnes	829	835	1,030
Energy intensity per tonne crude steel	GJ/tcs	20.00	19.80	19.65
CO <sub>2</sub> eq. emission - (audited EU ETS emissions) (5)	million tonnes	6.93	6.59	6.35
CO <sub>2</sub> eq. emissions - Total (ws scope 1+2+3) (6)	million tonnes	13.13	12.91	12.31
Carbon intensity in tonnes of CO <sub>2</sub> per tonne of crude steel	tonnes / tonne	1.90	1.87	1.86

3 Primary Steelmaking, IJmuiden production site.

4 The CO<sub>2</sub> 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 Direct emissions scope 1: formal and audited emissions according ETS. These figures relate to calendar years (i.e. the figure in column FY2017/2018 is for calendar year 2017 etc.).

6 Total (scope 1+2+3): based on methodology of worldsteel, excluding credits for slag delivery to cement industry.

		Calendar Year 2017	Calendar Year 2018	Calendar Year 2019
<b>Resources, emissions and waste (3)</b>				
Dust (PM)	tonnes	1,906	1,796	1,881
	kg/tcs	0.28	0.26	0.28
NO <sub>x</sub> (oxides of nitrogen)	tonnes	5,778	5,732	6,034
	kg/tcs	0.85	0.84	0.91
SO <sub>2</sub> (sulphur dioxide)	tonnes	3,232	3,125	3,159
	kg/tcs	0.47	0.46	0.48
Mass emissions to water, hydrocarbons	tonnes	1.2	1.1	1.4
Mass emissions to water, suspended solids	tonnes	252	311	285
Mass emissions to water, COD	tonnes	582	562	557
Material re-used through our process (excluding scrap steel)	1,000 tonnes	1,142	1,226	1,155
Volume of by-products sold (excluding granulated blast furnace slag (GBS))	1,000 tonnes	965	892	855
Slag to cement industry (i.e. GBS sales)	1,000 tonnes	1,365	1,328	1,285
Waste generated	1,000 tonnes	228	193	218
Waste – material reused, recycled by third parties	1,000 tonnes	187	143	170
Waste – material disposed to landfill	1,000 tonnes	35	48	42
Fresh water consumption	m <sup>3</sup> /tonne (tcs)	4.95	4.96	4.93
	million m <sup>3</sup>	33.73	33.90	32.6
Environmental complaints	#	1,189	3,072	3,672

3 Primary Steelmaking, IJmuiden production site

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>People (7)</b>				
Number of employees	#	9,534	9,763	9,629
Number of new hires	#	718	621	519
Number of new hires by gender	#M/#F	600/118	543/78	451/68
Number of retirements	#	220	81	116
Average age	#	47	46	46
Employees over the age of 50	#	4,179	4,181	4,087
Total turnover rate	%	3.1	4.2	4.6
Percentage of female employees	%	10.4	10.4	10.4
Percentage managers that are female	%	14.7	16.6	17.3
Number of hours training per employee	hrs/employee	41.8	59.3	10.4
Organisational Health Index (OHI) (8)	#	NA	NA	NA
% of staff development appraisal	%	83	68	NA
7 This data reflects the 'Social Unit IJmuiden' and comprises of Tata Steel IJmuiden B.V., Tata Steel Nederland Services B.V. and Tata Steel Technology B.V.				
8 The Organisational Health Index (OHI) measures nine elements of organisational effectiveness through an employer survey. The survey is undertaken every 2-3 years. In 2014/15 Tata Steel scored 51.				
<b>Community (3)</b>				
Number of applications for financial or in-kind support received (2)	#	64	62	69
Number of applications for financial or in-kind support approved (2)	#	20	24	23
Number of youngsters attending Tata Kids of Steel events: (2)	#	1,080	1,700	2,220
Number of Tata Kids of Steel events: (2)	#	4	7	4
Number of events	#			25

3 Primary Steelmaking, IJmuiden production site

# KEY FIGURES

## UNITED KINGDOM

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>Performance</b>				
Crude steel production	million tonnes	3.51	3.13	3.38
Liquid steel production	million tonnes	3.61	3.22	3.48
<b>Health and safety (1)</b>				
Fatalities	#	0	0	2
Lost-time injury rate – total	per million hours worked	1.46	1.24	2.06
Lost-time injury rate – employee	per million hours worked	1.47	1.13	2.25
Lost-time injury rate – contractor	per million hours worked	1.42	1.61	1.43
Recordables (total)	#	83	84	80
Recordables (employees)	#	59	60	62
Recordables (contractors)	#	24	24	18
Sickness Absence Rate	%	4.6	4.1	4.07
1 Tata Steel UK				
<b>Climate change (3)</b>				
Crude steel production	million tonnes	3.50	3.10	3.38
Steel recycled – Total	1,000 tonnes	559	531	497
External steel recycled	1,000 tonnes	167	133	117
Internal steel recycled	1,000 tonnes	391	399	379
CO <sub>2</sub> saved from external steel recycled (4)	1,000 tonnes	279	222	195
Energy intensity per tonne crude steel	GJ/tcs	23.6	24.2	23.8
CO <sub>2</sub> eq. emission - (audited EU ETS emissions) (5)	million tonnes	6.55	5.81	6.43
CO <sub>2</sub> eq. emissions - Total (ws scope 1+2+3) (6)	million tonnes	7.63	6.92	7.51
Carbon intensity in tonnes of CO <sub>2</sub> per tonne of crude steel	tonnes / tonne	2.18	2.21	2.22

3 Primary Steelmaking, Port Talbot production site

4 The CO<sub>2</sub> 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 Direct emissions scope 1: formal and audited emissions according ETS. These figures relate to calendar years (i.e. the figure in column FY2017/2018 is for calendar year 2017 etc.).

6 Total (scope 1+2+3): based on methodology of worldsteel, excluding credits for slag delivery to cement industry.

		Calendar Year 2017	Calendar Year 2018	Calendar Year 2019
<b>Resources, emissions and waste (3)</b>				
Dust (PM)	tonnes	2,046	1,961	1,936
	kg/tcs	0.57	0.64	0.57
NO <sub>x</sub> (oxides of nitrogen)	tonnes	4,967	3,842	4,834
	kg/tcs	1.39	1.24	1.43
SO <sub>2</sub> (sulphur dioxide)	tonnes	7,194	7,065	7,090
	kg/tcs	2.02	2.29	2.10
Mass emissions to water, hydrocarbons	tonnes	39	66	66
Mass emissions to water, suspended solids	tonnes	759	1,528	1,530
Material re-used through our process (excluding scrap steel)	1,000 tonnes	380	233	300
Volume of by-products sold (excluding granulated blast furnace slag (GBS))	1,000 tonnes	850	641	561
Slag to cement industry (i.e. GBS sales)	1,000 tonnes	700	686	818
Waste generated	1,000 tonnes	179	320	240
Waste – material reused, recycled by third parties	1,000 tonnes	161	297	223
Waste – material disposed to landfill	1,000 tonnes	18	30	17
Fresh water consumption	m <sup>3</sup> /tonne (tcs)	4.48	6.03	6.53
	million m <sup>3</sup>	16.00	18.6	22.1
Environmental complaints	#	292	779	1,274

3 Primary Steelmaking, Port Talbot production site

		FY 2017/2018	FY 2018/2019	FY 2019/2020
<b>People (7)</b>				
Number of employees	#	8,469	8,620	8,113
Number of new hires	#	871	826	354
Number of new hires by gender	#M/#F	776/95	731/95	288/66
Number of retirements	#	195	221	294
Average age	#	44	43	43
Employees over the age of 50	#	2,836	2,877	2,817
Total turnover rate	%	28.3	7.5	10.2
Percentage of female employees	%	10.7	10.7	11.0
Percentage managers that are female	%	18.1	19.1	20.0
Number of hours training per employee	hrs/employee	26.0	21.6	15.4
Organisational Health Index (OHI) (8)	#	NA	NA	NA
% of staff development appraisal	%	56.2	71.0	NA
8 The Organisational Health Index (OHI) measures nine elements of organisational effectiveness through an employer survey. The survey is undertaken every 2-3 years. In 2014/15 Tata Steel scored 51.				
<b>Community (3)</b>				
Number of applications for financial or in-kind support received	#	186	184	101
Number of applications for financial or in-kind support approved	#	59	56	54
Number of youngsters attending Tata Kids of Steel events:	#	2,265	2,700	2,800
Number of Tata Kids of Steel events:	#	2	3	3

3 Tata Steel UK

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