
FNSTEEL

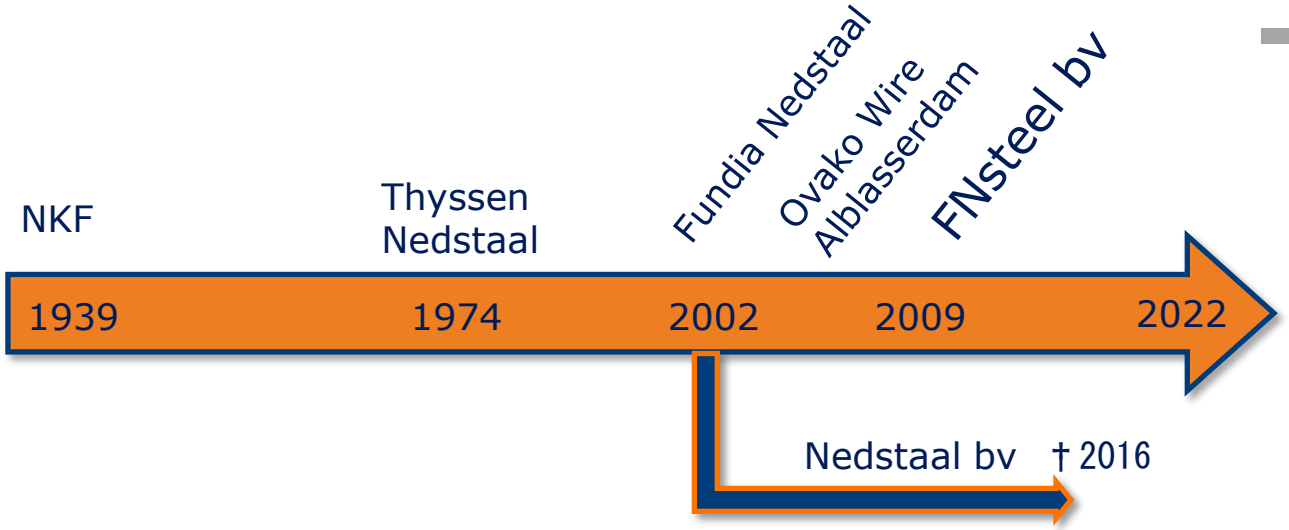
FNsteel is an independent producer and distributor of customized long steel products for high-quality applications.

In a modern rolling mill and state-of-the-art wire processing centre FNsteel produces untreated and treated wire rod and drawn wire.

Thanks to decades of experience, carefully built competences and strong partnerships FNsteel can be highly responsive to customer requirements such as short and reliable delivery times, consistent and high quality, special steel grades and coating and packaging solutions.

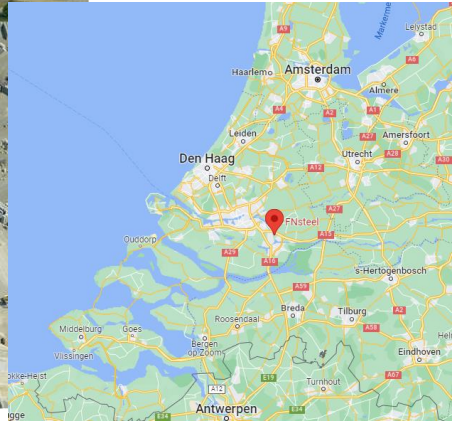
FNsteel’s turnover is approx. EUR 180 M with ca 330 employees

FNsteel Alblasserdam History



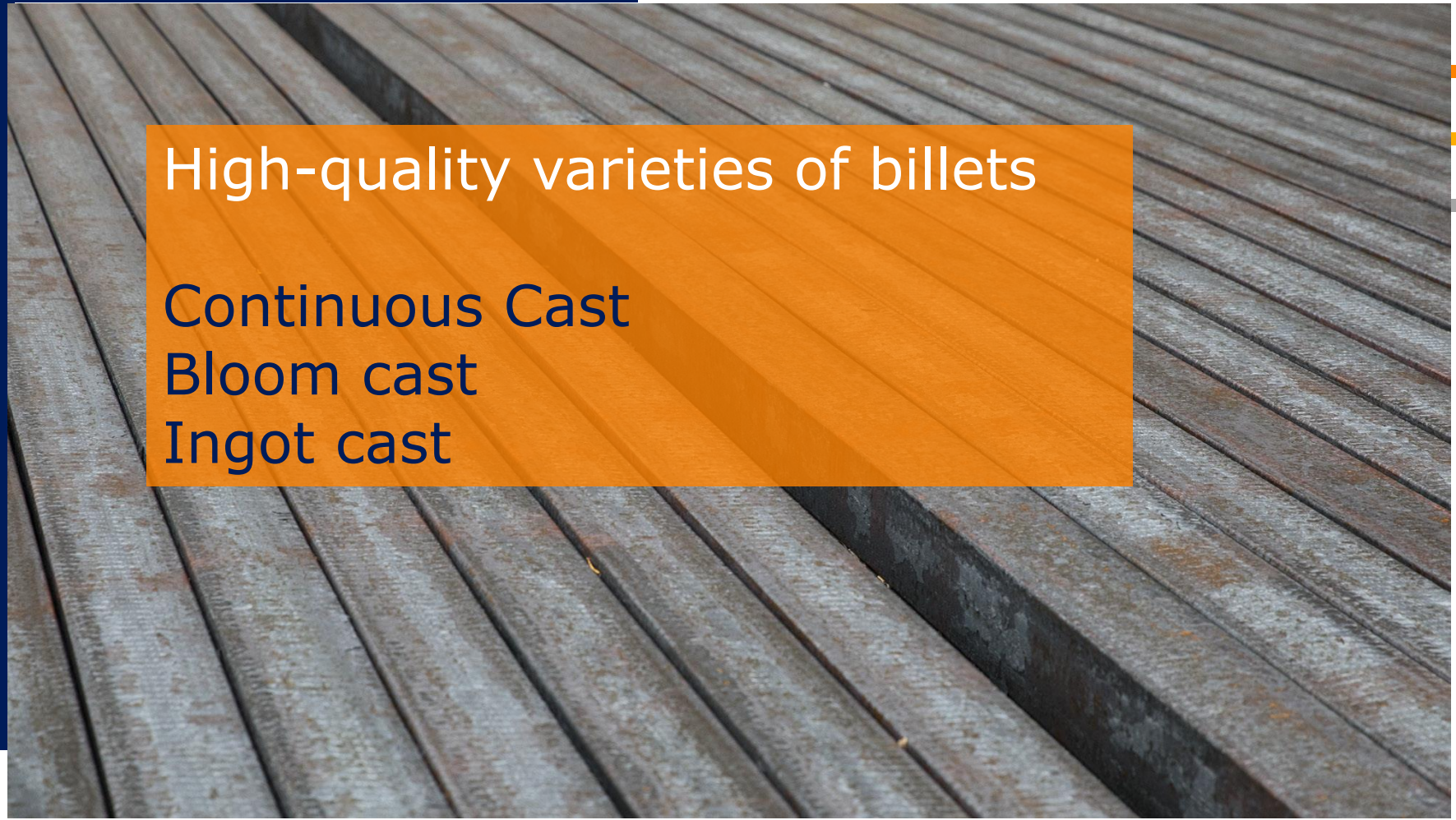
Ownership since 2020


Wire Processing Centre
Main office
Highway A15
Rolling Mill
Main gate →
Own harbour


Amsterdam
Haarlem
Almere
Leiden
Amersfoort
Den Haag
Utrecht
Delft
FNsteel
Gouda
's-Hertogenbosch
Roosendaal
Breda
Tilburg
Middelburg
Goes
Vlissingen
Eindhoven
Turnhout
Antwerpen

High-quality varieties of steel sources

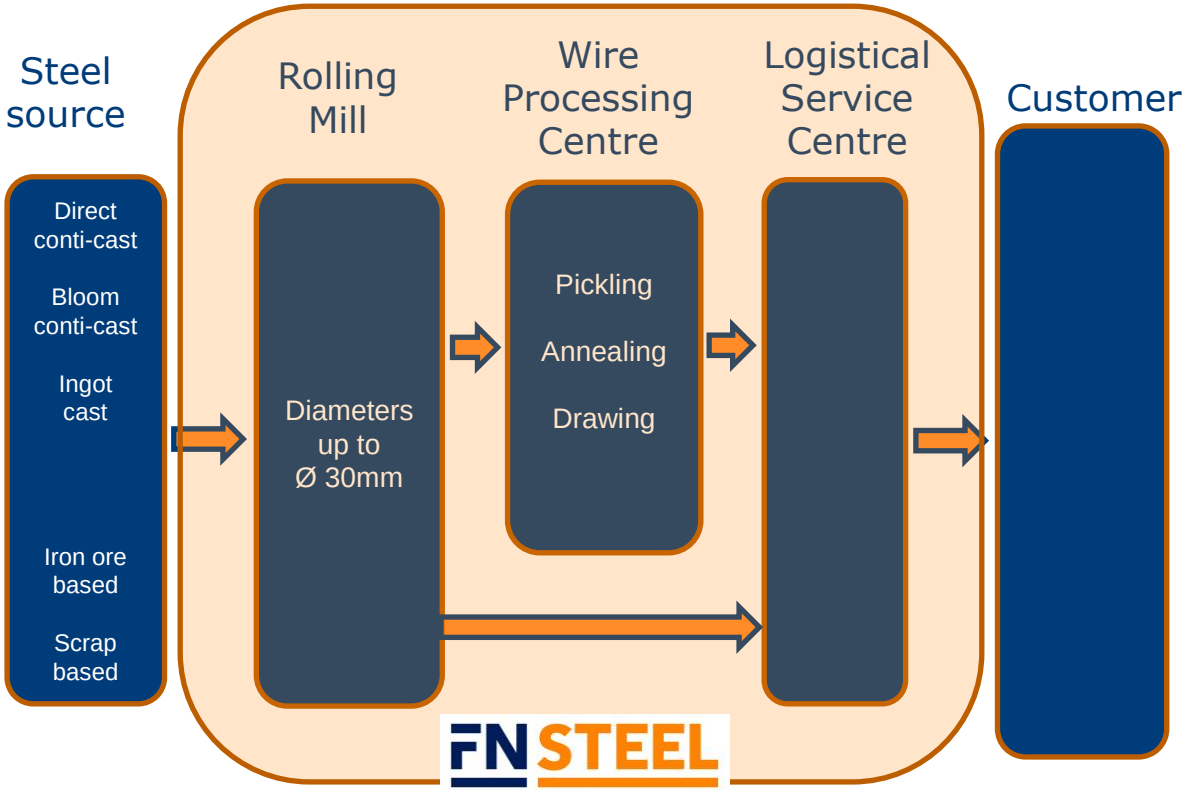
Iron ore based > Basic Oxygen Steelmaking
Scrap based > Electric Arc Furnace

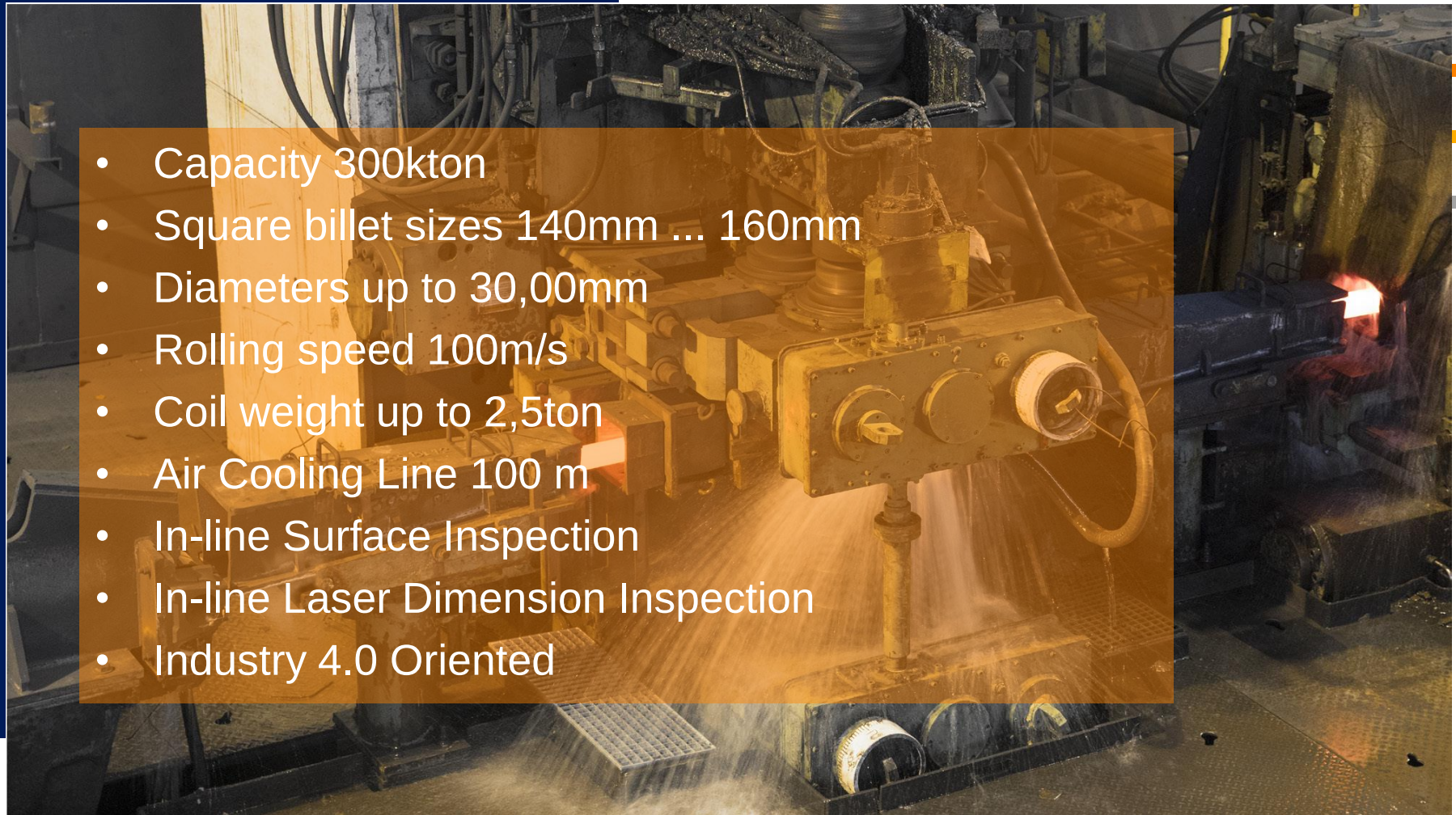


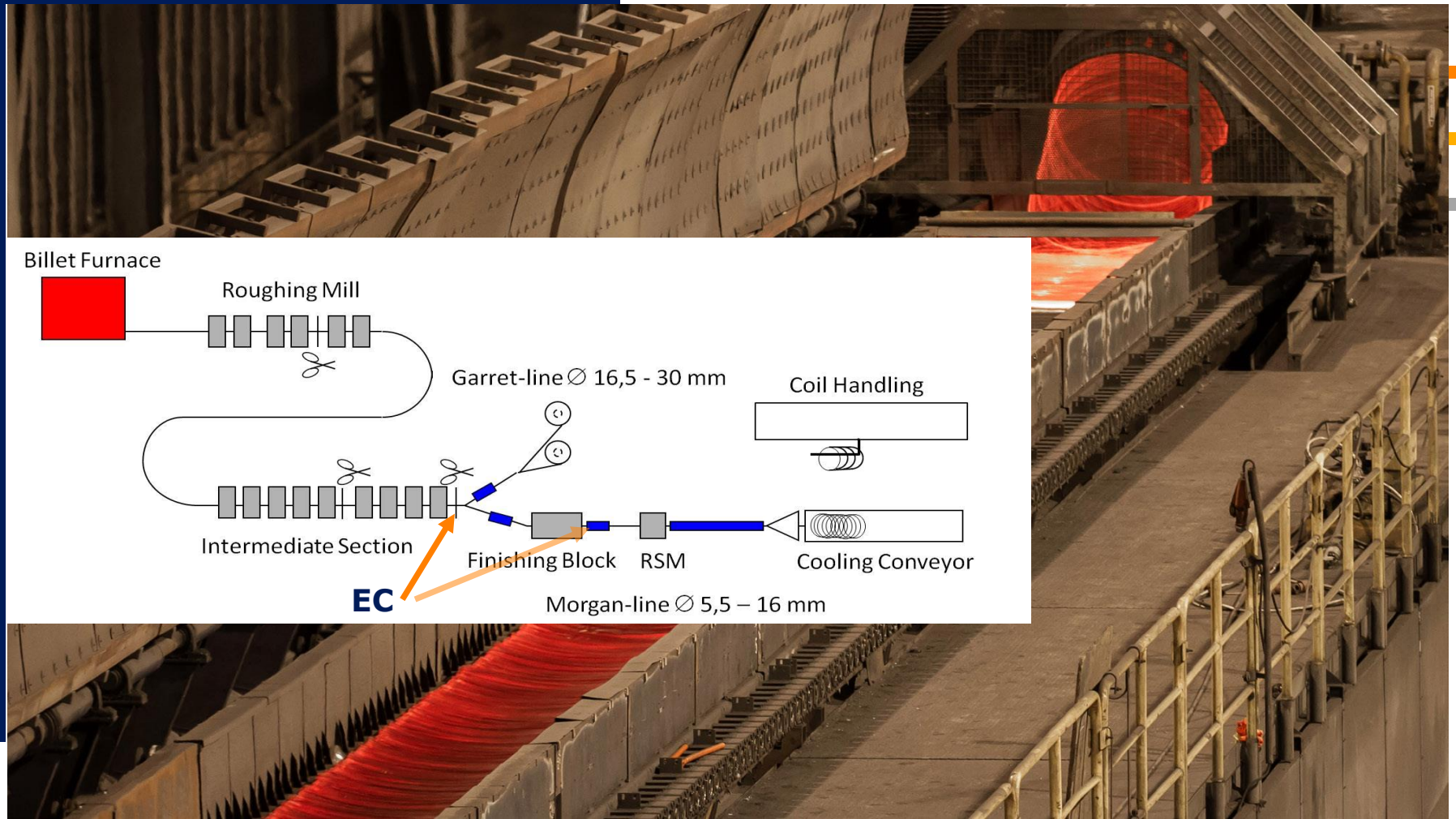
High-quality varieties of billets

Continuous Cast
Bloom cast
Ingot cast

Process & Material Flow




• Capacity 300kton
• Square billet sizes 140mm ... 160mm
• Diameters up to 30,00mm
• Rolling speed 100m/s
• Coil weight up to 2,5ton
• Air Cooling Line 100 m
• In-line Surface Inspection
• In-line Laser Dimension Inspection
• Industry 4.0 Oriented


Billet Furnace
Roughing Mill
Garret-line ∅ 16,5 - 30 mm
Coil Handling
Intermediate Section
Finishing Block
RSM
Cooling Conveyor
EC
Morgan-line ∅ 5,5 – 16 mm

Wire Processing Centre

Pickling
Annealing
Drawing

Pickling

Capacity 450 kt
Two automatic lines for cleaning the surface
Line 6 for pre-treatment
Line 7 for coating
Interface to coil handling system
Degreasing, HCl-acid, salt-carrier, phosphate, polymer, soap, lime and non-phosphated coatings

Annealing

Capacity 130 kT

→ Spheroidise annealing

→ Soft annealing

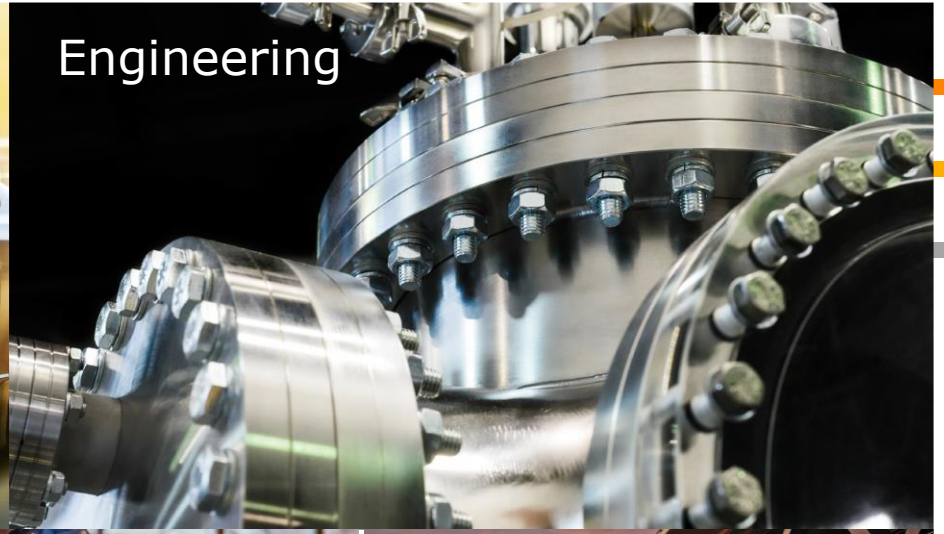
→ Recrystallisation annealing

Drawing

Capacity 80 kT
Size range 2.00-28.00 mm
Formers, coils, layer wound coils
Eddy current testing
Laser measurement
Phosphate free

All expertise and resources combined, like no other producer in Europe can.


Automotive


Engineering


Tools


Welding


Construction

Strategic alliances

British Steel
Ovako

- Hofors
- Imatra
- Smedjebacken

Multi-sourcing billet strategy

Georgsmariënhütte

Arcelor Mittal

Björneborg Steel | Buderus

Global player

Offices in NL / D / F / UK / IT / E / PL / TR / USA / S.E.Asia
Agents in IN / RoW

Quality & EHS

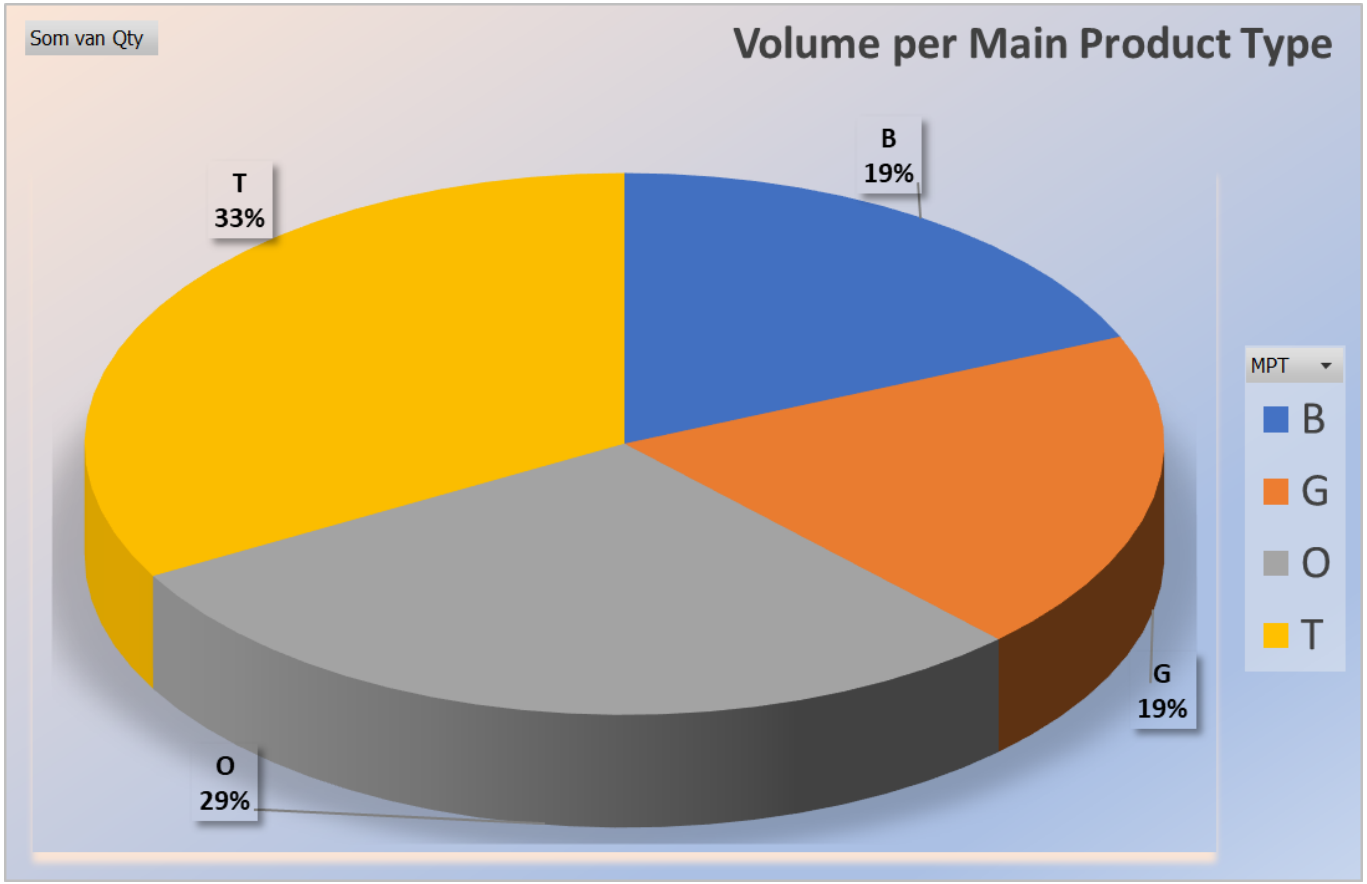
ISO 9001

IATF 16949

ISO 14001

ISO 45001

ISO 50001

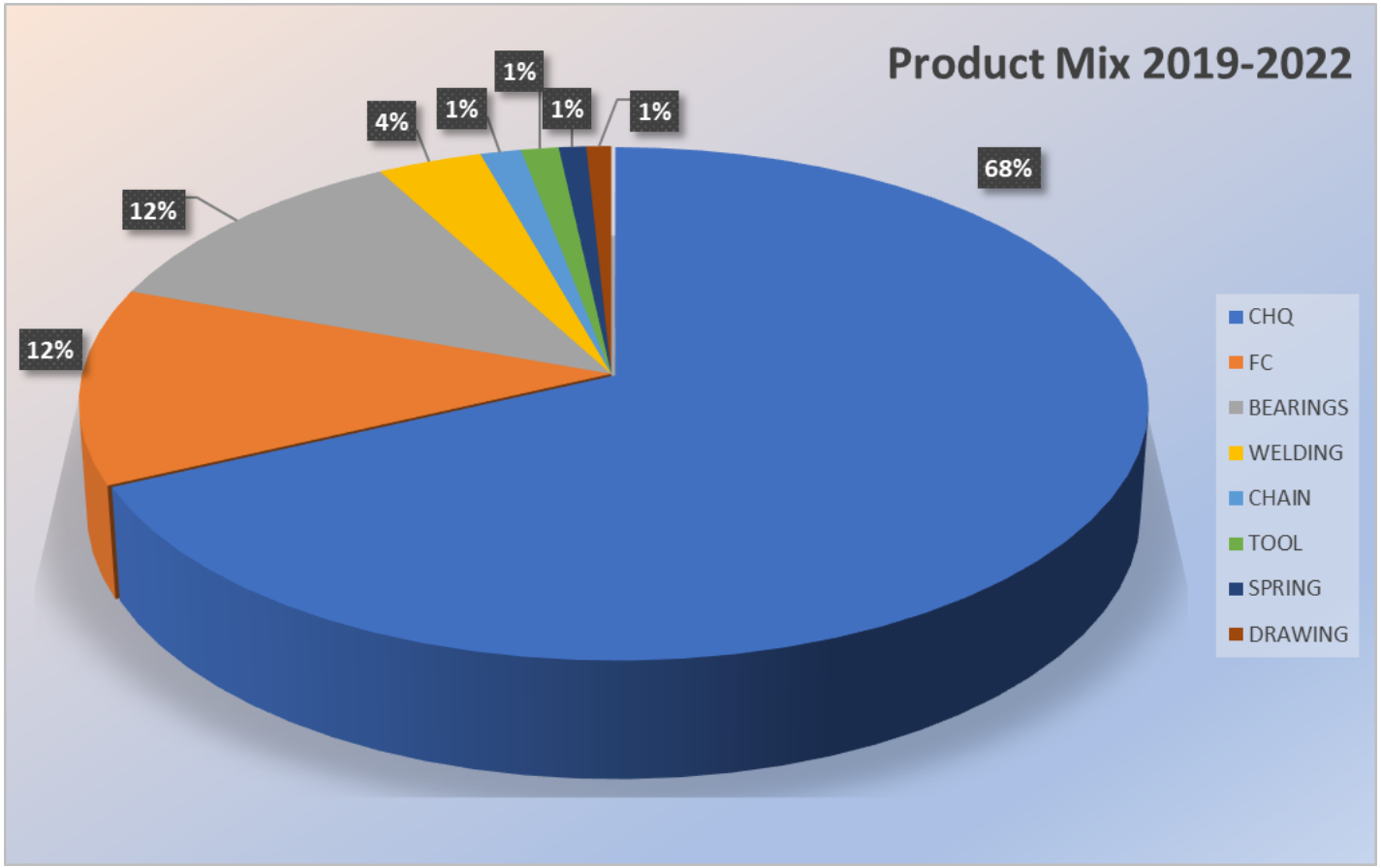


Pickled/treated

Annealed

As rolled

Drawn


Product Mix 2019-2022
68%
12%
12%
4%
1%
1%
1%
1%
CHQ
FC
BEARINGS
WELDING
CHAIN
TOOL
SPRING
DRAWING

Typical Standards for Products

Ball bearing grades

- *EN-ISO 683-17*
- *ASTM A295*

Cold Heading grades

- *EN 10263*

Non specific wire rod standards

- *EN 10025*

Terminology

International	Internal	Description
+U	*OWD*	*As rolled wire rod*
+U	*BWD/B*	*Pickled wire rod, generally with a reference on the customer order/spec on required coating*
+U+AC	*BWD/G*	*Annealed wire rod*
+U+AC	*BWD/GB*	*Annealed pickled wire rod, generally with a reference on the customer order/spec on required coating*
+U+C	*GD/OG*	*Cold drawn wire (K)*
+U+C+AC	*GD/EG*	*Cold drawn and annealed wire (KG)*
+U+AC+C	*GD/VG*	*Annealed wire and cold drawn (GK)*
+U+C+AC+LC	*GD/TG*	*Cold drawn and annealed wire with skin pass (KGK)*

Quality Control, rolling mill

Process control

- *Laser diameter control*
- *Eddy Current surface quality control*
- *Upset test*

Quality Control, drawing mill

Process control

- *Diameter control, manual measurement*
- *Eddy Current surface quality control for certain diameters, on request*
- *Visual checks on surface quality*

Quality Control, laboratory

Product control

Microscopic:

- *Decarburization*
- *Steel cleanliness*
- *Surface defects*
- *Structure*

Mechanical:

- *Tensile strength*
- *Reduction of Area*
- *Elongation*
- *Cold upset test*

Chemical:

- *Composition*
- *Surface Coating*

Typical Standards used for QC

Steel purity

- *DIN 50602 (K or M)*
- *ISO 4967*
- *ASTM E45*

Tolerance

- *10108 (A or B)*

Surface condition

- *EN-ISO 9443*

Structure

- *SEP 1520*

Greener Steel route

Decarbonisation

It's not only about reducing carbon emissions by over 90% but rather about securing continuity and efficiency in the vehicle market

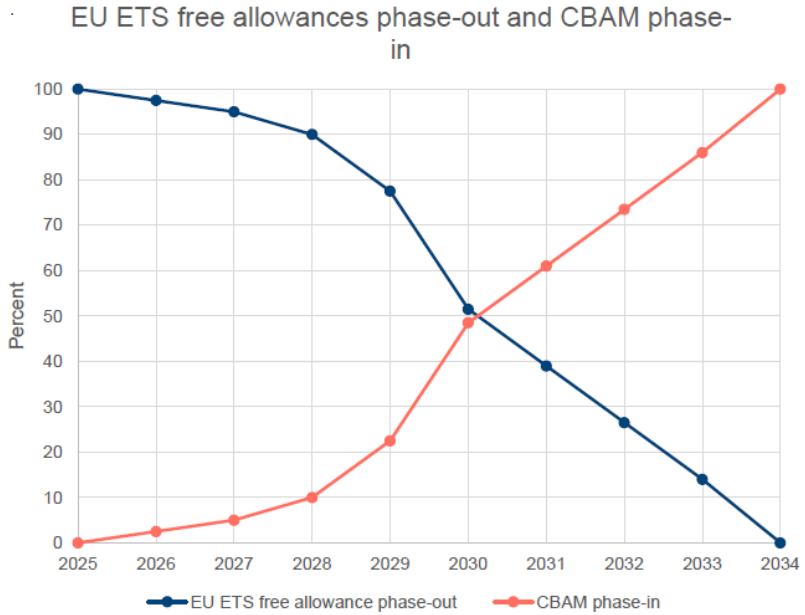
1. Renewable Energy Transfer (Scope I & II)
FNsteel fully transferring to 100% green electricity from Dutch wind park.
Result: 0 emission. (-71kg CO2/ton of steel).

2. Green Billets (Scope III)
FNsteel is introducing 2 "green" routings the billet supply.

1. "Greenest steel" with Ovako with 90% CO2 reduction instead of a Basic Oxygen Steelmaking (BOS)
   Clean green steel, EAF-routing, post-consumer scrap, hydrogen facilities, no carbon sett-offs.
   => Customer trials and first supplies.
2. "Green steel" with British Steel by EAF instead of BOS with 75% CO2 reduction

3. Scrap collection (Scope III)
Post-consumer scrap. Closed loops with stable supply chains. Partnerships.

The phase-out of free allowances and phase-in of CBAM will increase costs in the supply chain if emissions are not reduced in the same pace



- Less amount of EUAs (EU Allowances) made available to the market each year
- Fewer EUAs given for free each year

Price for auctioned/traded EUAs estimated to ~150€/t CO2e by 2030 (BloombergNEF)

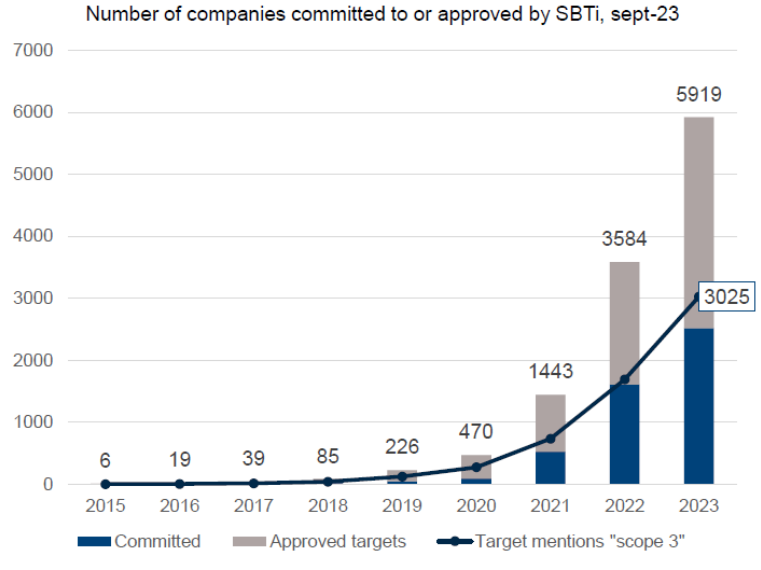
Potentially increased costs for many players already today due to the reduced number of free allowances within ETS

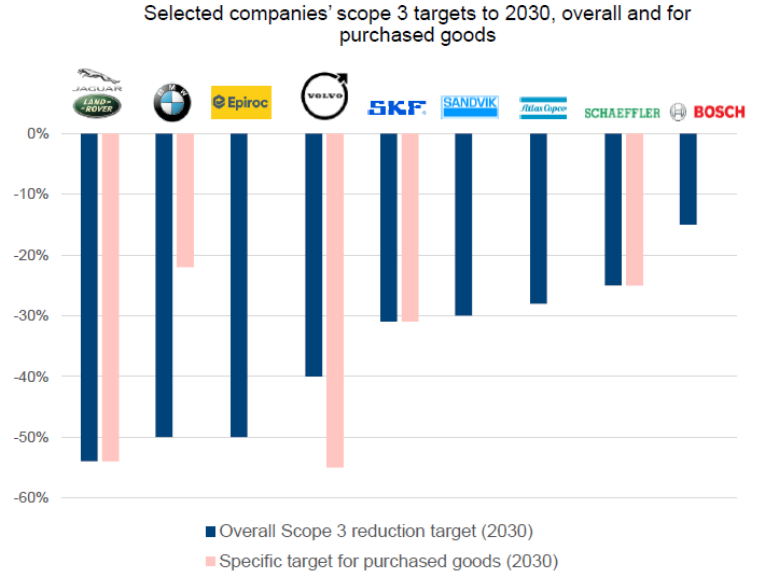
Total verified emissions divided per total allocation of free allowances received for the period 2008-2022 for selected steel companies.

Red area: *100 % < Total emissions / Total free allowances < 140 %*
Blue area: *70 % < Total emissions / Total free allowances < 100 %*

It’s about scarcity

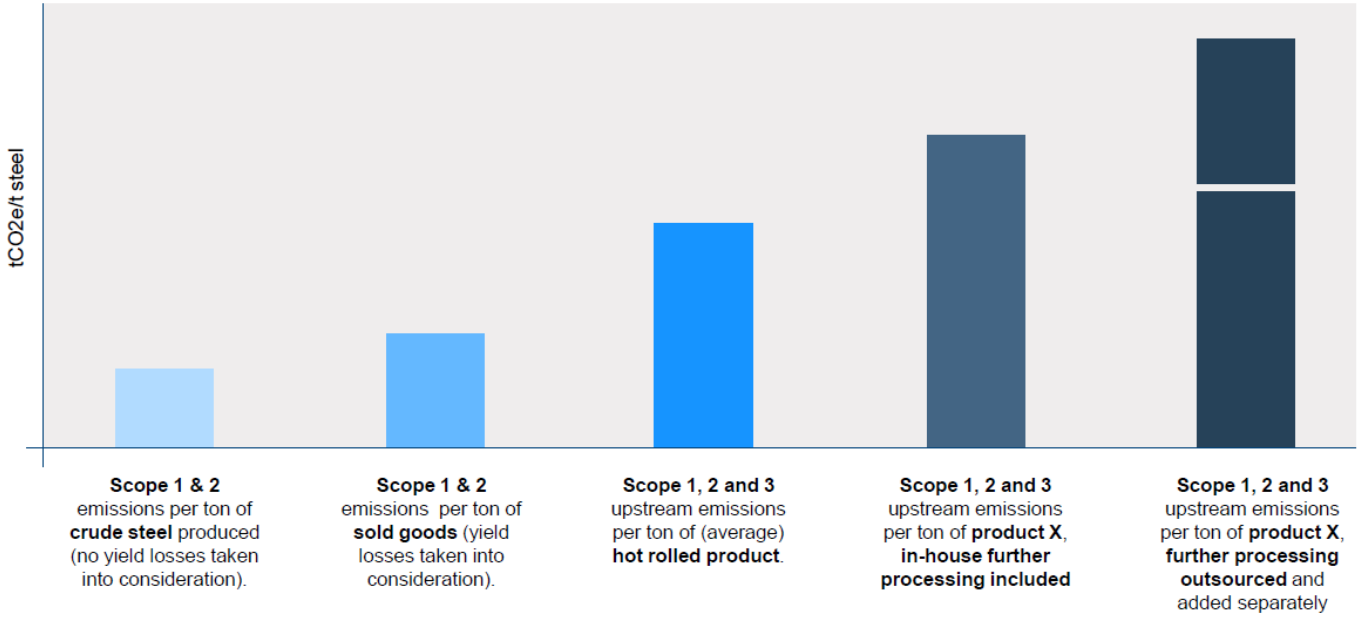
Increased demand for low carbon products due to stakeholder’s expectations and voluntary commitments such as SBTi





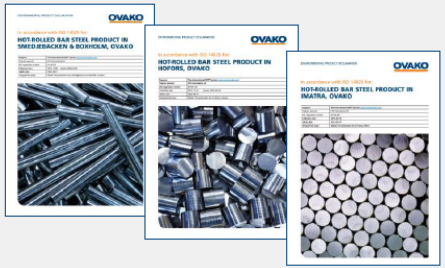
SBTi is a “soft” commitment w/o direct penalties but is increasingly effecting equity stories and debt agreements hence should be considered as “hard”

Apples & Peers



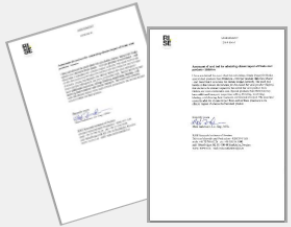
Adjusting and adding in accordance with product specification

Upstream + Steel Mill + Rolling Mill



Third party verified cradle-gate-emission in Ovako's Environmental Product Declarations (EPD)

Transport + Secondary Rolling + Further processing



Product specific data on alloying content, further processing and yield effects

= Carbon footprint/ product (kg CO2e/t)

What does this mean for you?

Choosing green today reduces your overall emissions by >80%

FNsteel is ideally situated to electrify it's production processes using green electricity.
This drives clean and economic operation for the near future.
We are commited to increase the volume of green processing offering to our markets.

FNsteel's processing route CO2e emissions in kg CO2e/ton finished product

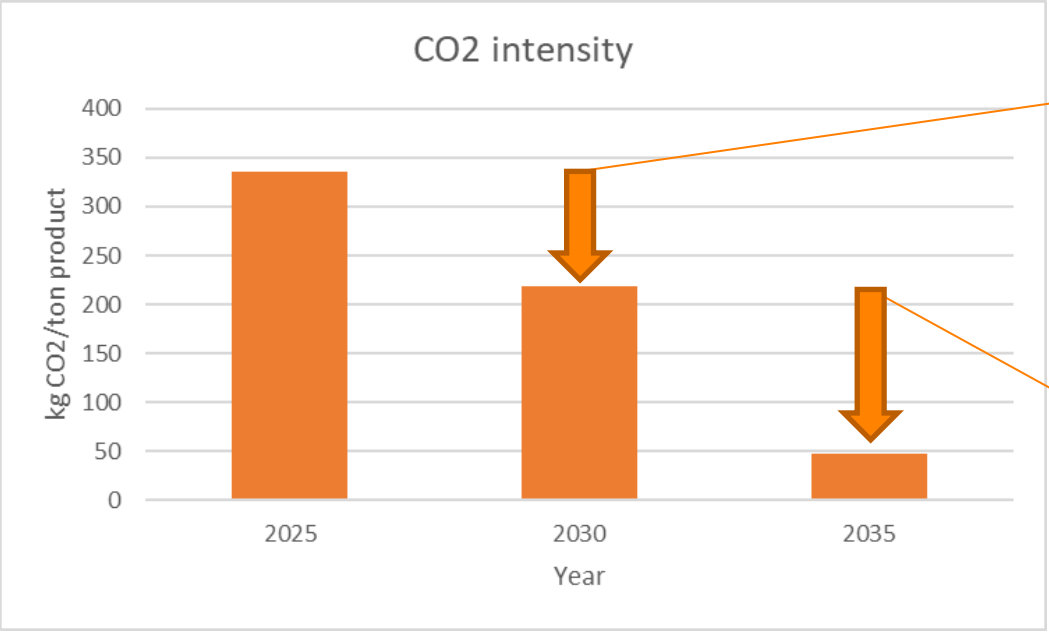
Traditional processing		2025	2030	2035
Scope 1	Natural gas	146	124	0
Scope 2	Electricity	128	90	0
Scope 3	Steel	2481	2481	2481
Total	**kg CO2e/ton**	**2755**	**2695**	**2481**

Green processing		2025	2030	2035
Scope 1	Natural gas	146	124	0
Scope 2	Electricity	0[a]	0[a]	0
Scope 3	Steel	190[b]	95[b]	47
Total	**kg CO2e/ton**	**336**	**219**	**47**

All emission in kg CO2e/ton product using CBAM methodology (but allowing scope 2 carbon offsetting)
[a]:FNsteel buys green electricity (GVO) from a nearby windmill park (Jaap Rodenburg II, Almere) compensating scope 2 emissions of electricity (128 kg CO2e/ton in 2023).
[b]:Ovako off-sets their scope 1 and 2 emissions (Carbon Neutral Now).

CO2 reduction projects: Green processing route

Planned projects outlook to 2035



2030
- Implementation e-boiler
- Scope 2 reduction (grid and PPA's)
- Reductions in upstream emissions

2035
- Annealing furnaces electrified
- Billet re-heating electrified
- Scope 2 zero due to net-zero grid
- Further reduction upstream emissions

Thank you!
Any questions?