

Belgian steel in 2020

Annual report



A word from our Chairman

Market situation

2020 will be remembered as the year the COVID-19 pandemic gripped the world. It forced us to radically adapt how we live and work. The Belgian steel industry was hit hard and saw its activity fall by around 15% annually to the lowest level in the last decade. The low point was reached in the second quarter when several production lines had to be shut down due to the fall in demand for steel across many industries. As a result, large numbers of blue-collar and white-collar workers and managers were placed on COVID-19 temporary unemployment.

A clear economic recovery was observed from the fourth quarter onwards. We hope we can continue this trend towards a more normal business environment in 2021 and maintain it thereafter. The crucial factor will be the safeguard measures that were introduced by the European Commission in 2019 in response to the introduction of import restrictions in the USA, which increased the risk of even greater inflows of non-European steel. These measures expire on 30 June 2021. Belgium's steel industry is calling for them to be extended, especially as the reasons behind their implementation remain valid. The European steel industry's economic position remains fragile, while the considerable surplus of production capacity outside the EU has not yet been absorbed.

Green Deal for steel

2020 also saw Europe's climate ambitions become more clearly defined, with a planned 55% reduction of CO₂ emissions by 2030 compared to 1990 levels. Furthermore, the continent aims to be carbon neutral by 2050, an objective to which the Belgian steel industry is fully committed. Last year, several major investments were made to achieve this goal.

Firstly, the proportion of fossil carbon used as a raw material in the blast furnace process has been reduced and replaced by, among other things, torrefied carbon from wood waste. Soon, hydrogen and other carbon sources, such as waste plastics, will also be used as recycled carbon.

Secondly, considerable investments are being made to recover CO and CO₂ from blast furnace gases and convert them into bioethanol or other forms of Carbon Capture and Utilisation (CCU) technologies. As such, the steel industry is increasingly moving away from being a simple steel producer. It is becoming a circular waste processor and a supplier of various raw materials to other industries.

Nevertheless, the move towards climate-neutral steel production is like putting together a complicated jigsaw puzzle of multiple pieces, the configuration and dimensions of which are still evolving. As soon as the appropriate design for each component is found, the whole can be formed into the desired final image. Several of the important pieces of this puzzle await a legislative initiative by the European Commission in June 2021.

The Carbon Border Adjustment Mechanism (CBAM) and the Emissions Trading System (ETS). It is our belief that non-European steel should bear the same CO₂ charges and costs as European and Belgian steel. In the space of four years, the purchase price of a CO₂ emission allowance has increased from around €5 to around €40 per tonne of CO₂. This represents an additional cost of roughly 10% for carbon steel from the blast furnace industry. Consequently, European steel's competitiveness has been further weakened compared to that of foreign steel.



When introducing a Carbon Border Adjustment Mechanism, it is also important to provide a timetable for the gradual phasing out of free emission certificates. This timeframe must allow for the implementation of the latest climate-neutral steel production technologies, while simultaneously phasing out the free emission certificates. A sudden scrapping of these certificates would result in an even worse situation than before the introduction of the Carbon Border Adjustment Mechanism, which would hamper the development of a cost-effective and sustainable business model. As for the revision of the Emissions Trading System (ETS) parameters, we urge that the impact on the number of free emission rights be minimised as much as possible. Most notably, the activation of the Cross-Sectoral Correction Factor (CSCF) must be avoided.

The circular economy and the Waste Shipment Regulation (WSR).

A large proportion of Belgian crude steel production is carried out in electric furnaces that operate almost exclusively on scrap metal. Unfortunately, the shortage of good quality scrap is becoming more and more acute. This makes it all the more deplorable that over 20 million tonnes of scrap metal leave the EU, each year, to be used in other countries where climate and environmental standards are much lower than in the EU. We, therefore, strongly reiterate our demand for a more precise regulation of these exports, as well as stricter enforcement of this regulation, to facilitate the circular economy in Belgium and in the EU.

Financing the climate transition. Investments in climate neutral steel production require considerable financial resources. It is, therefore, crucial that our industry's transition be qualified as sustainable by the relevant European legislation. This would enable it to attract the attention of the investment community and secure the funds and appropriate financial instruments to complete the transition.

Outlook for the future

2020 was the year COVID-19 made us painfully aware that international collaboration is crucial to our collective future. First and foremost, we would like to express our gratitude to the thousands of workers in our sector whose commitment, support and flexibility have seen us through this unprecedented and challenging year.

We would also like to thank the various authorities who, through a range of measures, have made it possible to overcome this very difficult period.

Lastly, a little note of hope and optimism, as the health crisis and the economic stimulus packages that have been launched as a result of it, have paved the way for a more sustainable society.

Manfred VAN VLIERBERGHE
Chairman

Trade

The significant economic downturn in 2020 caused a sharp decline in European steel consumption. Apparent consumption fell from 154 Mt in 2019 to 134 Mt in 2020.

Imports of carbon steel into the EU decreased over the last year but remain at worrying levels compared to 2012. This fall was due to reduced market demand, market prices being at rock-bottom levels and the impact of safeguard measures for certain product categories. Turkey remains by far the largest exporting country, followed by Russia and South Korea.

Stainless steel imports also remain high despite the decline in 2020 which, in addition to the above-mentioned reasons, was due to an anti-dumping measure on hot-rolled stainless steel from China.

Steel production in Belgium

Fig.1a - Steel production in Belgium (ton) ■ 2020 ■ 2019 ■ 2018

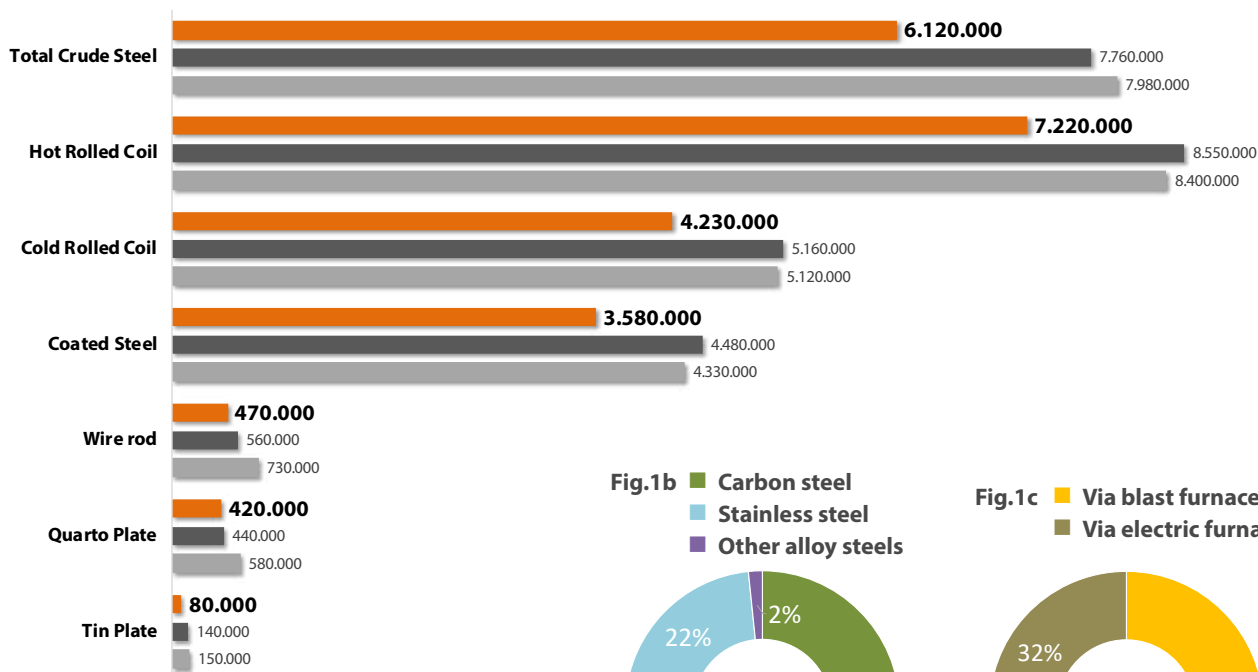


Fig.1b ■ Carbon steel ■ Stainless steel ■ Other alloy steels

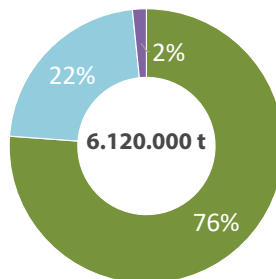
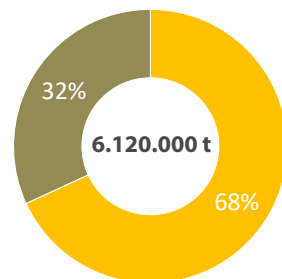


Fig.1c ■ Via blast furnace ■ Via electric furnace



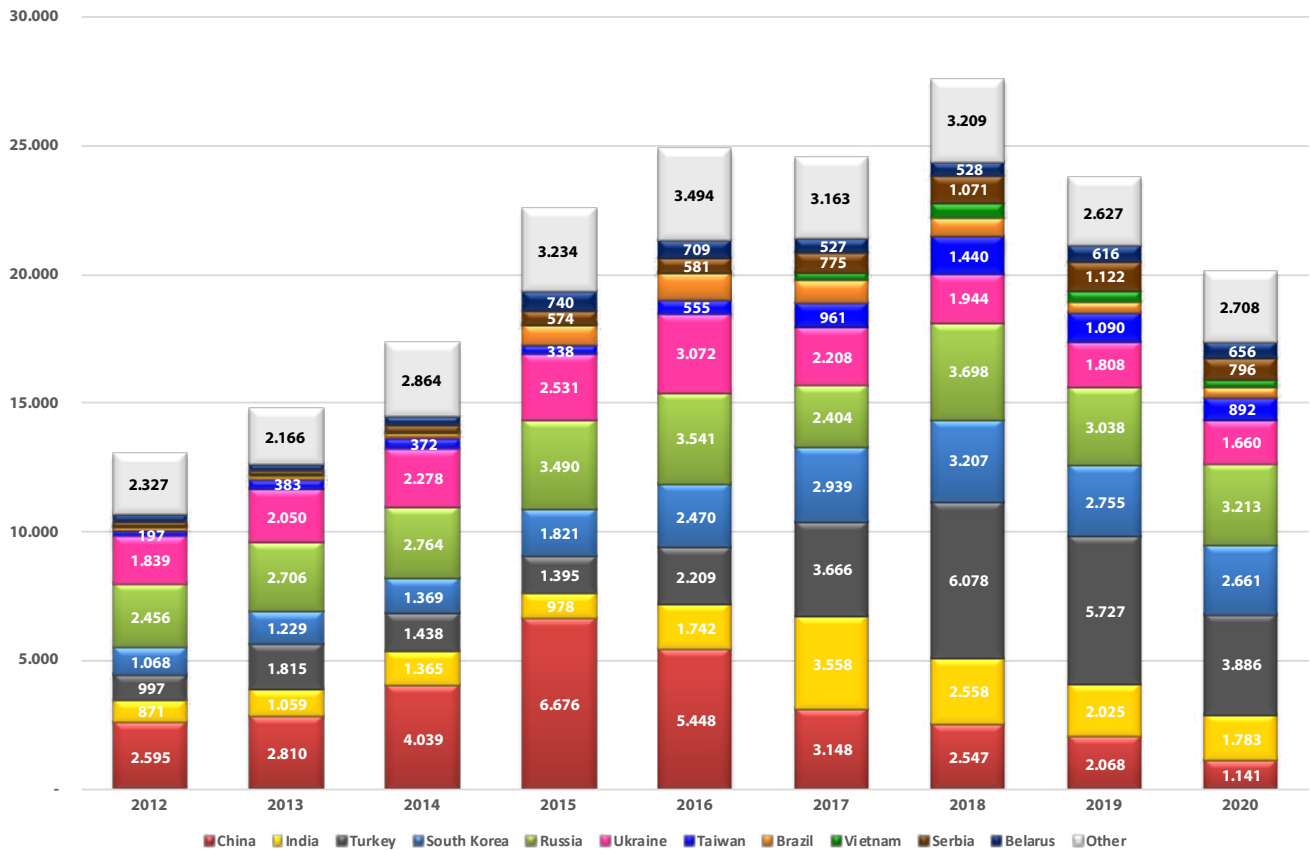
ArcelorMittal's 'All Weather Terminal' at North Sea Port keeps 25,000 lorries off the road

On 15 December 2020, the first ever, covered 'All Weather Terminal' (AWT) at North Sea Port became operational. The new terminal in Ghent, located next to ArcelorMittal Belgium's cargo quay along the Ghent-Terneuzen canal, will be used primarily for the storage and shipment of ArcelorMittal Belgium's finished steel coils. The AWT has a 200m-long roofed quay wall, a 25m wide dock and a volume of 30 metres above water level, which allows ships with a loading capacity of up to 10,000 tonnes to dock at the new quay. The first ever AWT in Ghent makes it possible to combine the various flows of goods even more efficiently, offering companies more logistical possibilities. Previously, high-quality steel could only be loaded in dry weather. With the new terminal, this can be done 24/7, regardless of the weather conditions. The AWT is also a sustainable investment, as it saves up to 25,000 lorry journeys per year.

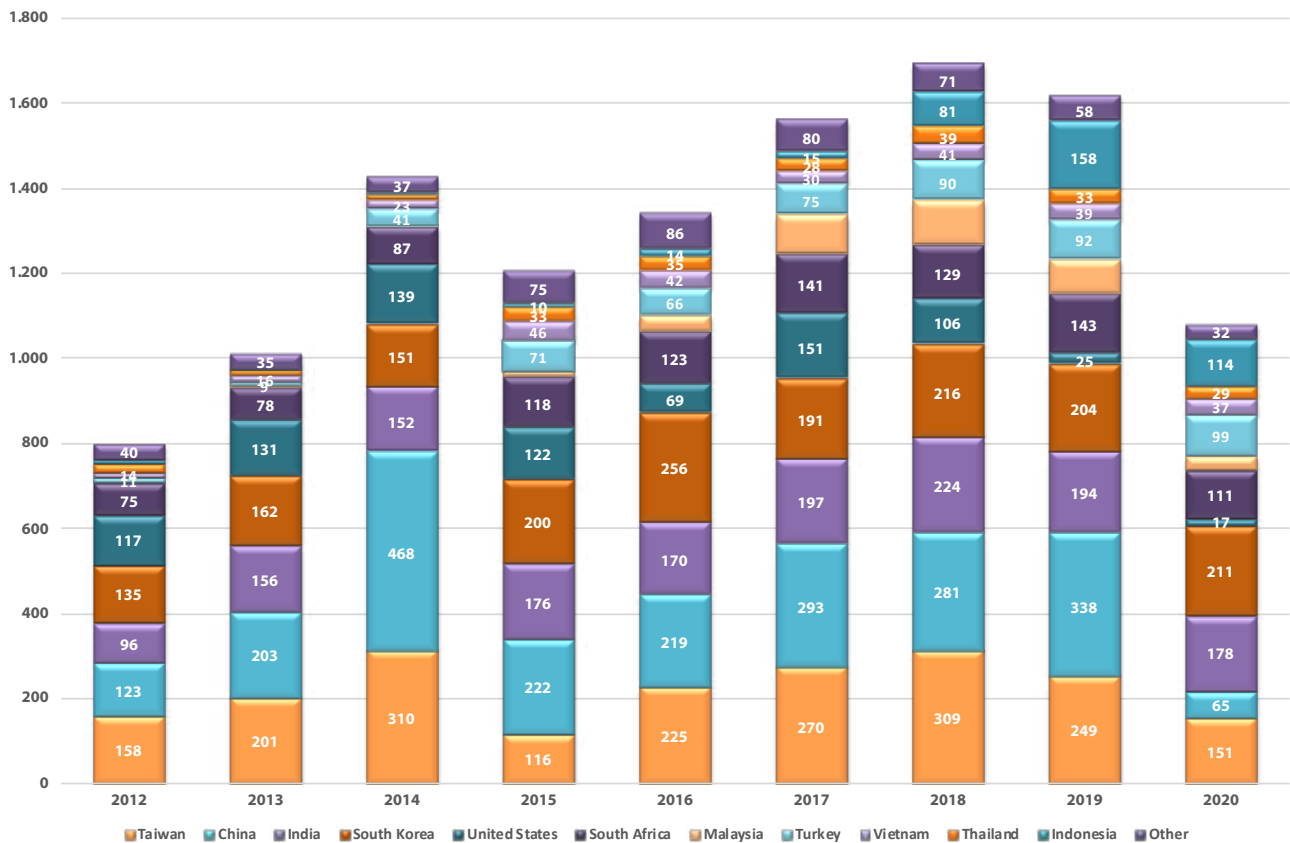


Steel import in EU28 (kt)

Carbon steel*



Stainless steel*



(*) Excluding semi-finished products

Social affairs

Looking back at 2020, no area of activity escaped, directly or indirectly, the immeasurable impact of the crisis triggered by the COVID-19 pandemic.

The 'social' (in the broadest sense of the word) side of the industry was, of course, strongly affected. However, while the crisis has undeniably called into question many things that were once considered certainties, we believe it has also, in certain areas, acted as an indicator of existing issues.

Three axes of reflection highlight this:

1. Health

The workers' health is the primary concern. As a result of the pandemic, companies have set up countless new measures to guarantee the continuation of, and increase the safety of, both their activities and the health of their workers.

However, the measures implemented, the action plans, the tools mean nothing without strict compliance with the health measures of each person present in the company.

Now, more than ever, we know that safety and health are everyone's business.

2. Legal and regulatory framework

The numerous social and economic consequences forced the authorities of Belgium's political entities to deploy exceptional social, fiscal and social security support measures.

One of the most emblematic measures is, without doubt, the extension of the existing 'force majeure' furlough system to the various situations of temporary unemployment, generated more or less directly by the quarantine of workers or due to various childcare situations (brought about by the coronavirus crisis).

The primary, two-fold advantage of this system is that it reduces administrative formalities for employers to a minimum and it applies indiscriminately to all groups of workers (blue-collar, white-collar, management).

This supports the credo long-defended by our federation that there is a need to simplify the administrative formalities for temporary unemployment and harmonise the arrangements for blue-collars and white-collars.

Companies need specific measures due to the crisis, but it is also necessary to draw lessons from the implementation of such measures. This allows for the positive evolution of legal and regulatory social frameworks, to make them more dynamic and adaptive to social issues.

3. Social relations

2020 was a year of trade union elections, the most obvious expression of workers' representation in the company.

Despite debates about whether it was right to hold the elections during the health crisis and all the practical difficulties linked to their organisation, the elections did take place in the second half of November.

In the end, participation rates for the Works Council and Committee for Prevention and Protection at Work elections (CPPT/CPPW) exceeded 60%. Given the context, this was an undeniable success that ensured the representativity of those who were elected and promoted social dialogue in the companies.

In conclusion, companies cannot operate sustainably without a permanent health and safety culture, a supportive and adaptive legal and regulatory framework and open and constructive social dialogue.

These three key components of the 'social' side of our industry remain priority objectives for companies in our sector.

Logistics developments at NLMK La Louvière: the introduction of 'polywagons'

At the beginning of July 2020, the logistics teams at NLMK La Louvière announced the introduction of multi-purpose wagons for the transport of slabs and coils. This innovation aimed to optimise the logistical flow to improve customer service while reducing the industrial activity's impact on the environment.

With the support of the NLMK Group, the logistics teams at NLMK La Louvière decided to install multi-purpose wagons for products coming from the port of Ghent. The slabs, NLMK La Louvière's raw materials, arrive at the site by train. In the past, the train left empty but now it leaves for the port of Ghent loaded with hot-rolled and cold-rolled coils. The wagons can carry both slabs and coils.



Climate and energy

Climate policy

In 2019, the environment dominated the political agenda due to, among other things, a series of student actions. In 2020, the debate looked to have been sidelined due to the COVID-19 pandemic, but that, however, could not be further from the truth. The health crisis and the subsequent economic recovery plans in fact offer a unique opportunity to accelerate the sustainability of our economy. Belgian steel companies jointly submitted no less than sixteen green projects to the Belgian Government for funding through the Recovery and Resilience Plan. At the same time, the *'Contextanalyse en roadmapstudie – Vlaamse industrie koolstofcirculair en CO₂-arm'* (Context analysis and roadmap study – Towards carbon-neutral and low- CO₂ Flemish industry) study conducted by Deloitte on behalf of VLAIO - with which the Belgian Steel Federation collaborated – once again confirmed the potential of the Flemish and, by extension, Belgian steel industry to achieve CO₂ neutral production by 2050.

At the same time, Europe continued to push ahead with its climate policy agenda in 2020 and the European Commission further accelerated the implementation of its so-called 'Green Deal', which aims to make Europe the first climate-neutral continent by 2050. In-depth studies carried out by the European Commission in 2020 also showed that an interim target of at least a 55% reduction in greenhouse gas emissions by 2030 compared to 1990 will be needed to achieve this goal. The Belgian steel industry is committed to making this Green Deal a success, provided that the necessary financial resources and an adequate regulatory framework are available. As far as the financial resources are concerned, we envisage not only public money, but private investment too. To this end, the EU is developing its Taxonomy Regulation, a tool to stimulate investment in sustainable economic activities and combat greenwashing. The Taxonomy identifies any economic activities that could be considered sustainable and therefore eligible for funding. Of course, it is essential that steel industry activities benefit from

such a sustainability label. The Belgian Steel Federation made sure, therefore, that it was in frequent contact with the relevant stakeholders and expects a final decision in April 2021.

Energy policy

In 2020, the Steel Federation continued to advocate competitive electricity prices for the Belgian steel industry. We are cautiously optimistic that both the new federal government agreement and the Flemish government agreement provide for the implementation of an energy standard to eliminate the competitive handicaps we have in Belgium compared to neighbouring countries. This standard will determine the maximum level of energy-related costs and will be based on an annual study of energy costs for companies and households. Depending on the results, measures could be taken to safeguard the competitiveness of companies.

Despite this, 2020 saw electricity costs remain a widespread problem for the Belgian steel industry. Deloitte's annual study, commissioned by Febeliec, indicated that electricity costs in Belgium for sectors such as the steel industry, are still considerably higher than in neighbouring countries. The price handicap varies between 7% and 27% (depending on the specific characteristics of the company) compared to our neighbours.

The Belgian Steel Federation welcomes the increase of compensation for indirect costs of carbon leakage, granted by Walloon authorities for 2019 and 2020 emissions. However, it recommends not operating with fixed funding levels each year, but rather granting the maximum authorised aid annually, as is already the case in Flanders and in neighbouring countries. This higher and automatic compensation would make it possible to limit the loss of competitiveness vis-à-vis foreign markets and would also create a secure investment climate.

1,500 solar panels at Industeel Belgium Charleroi

Despite the economic impact of COVID-19, some projects have continued or even been completed in recent months. In March 2020, the Industeel site in Charleroi had 1,512 photovoltaic panels installed on its roof. With this project, Industeel is strengthening its commitment to energy efficiency, renewable energy and the reduction of CO₂ emissions at all its facilities.

Each panel can provide 320 Wp (peak watts). With their South-facing position, this corresponds to an expected annual electricity production of 500 MWh, equivalent to the energy consumption of 120 households.



Aperam Genk, in collaboration with Vandersanden, is storing its CO₂ in bricks

Steel production generates several by-products, including steel slag (more than 700,000 tonnes per year in Flanders). In a linear economy, this slag would be treated as waste and, therefore, landfilled. However, our experience of the circular economy shows that this slag can be given value through various interesting applications and is a valuable secondary raw material for other sectors.

Carbonisation is one such example: by adding CO₂ to steel slag, it becomes a raw material for sustainable building materials. The result is a sustainable building brick with the same qualities as a traditional brick. The major difference is that no new raw materials are used and that the CO₂ is absorbed instead of being emitted. 1 m³ of 'carbstones' results in a net saving of 350 kg of CO₂.



In 2020 CRM, the collective Centre for Research in Metallurgy continued to support the steel industry with a particular focus on innovations to tackle the challenges related to the transition towards a cleaner, smarter, more resource efficient and competitive industry. More than 260 technical experts collaborate in multi-disciplinary teams to develop and upscale clean, energy & resource efficient production processes integrating advanced and digital technologies as well as new steel-based solutions for emerging domains related to energy production, storage, transport, mobility ...

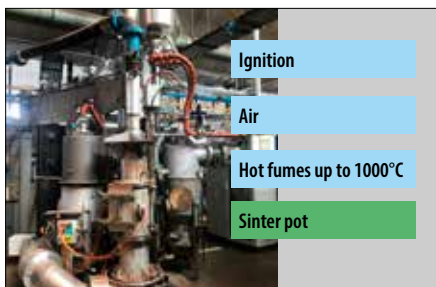
To decrease the CO₂-emission and fossil carbon dependence of the steel industry, we study the use of various abundant waste streams for the production of alternative reductants and fuels for iron & steel making. It mainly covers the preparation of the waste materials (mixing, de-watering, briquetting...), the necessary thermal conversion step and its optimal use in steel plants. On thermal conversion, our large array of pilot equipment allows us to identify the best technology & process conditions to produce the suitable alternative reductants and fuels from each waste stream.

Such alternative solid fuels can for example be used in blast furnaces, coke plants or sinter plants. Another way to drastically reduce up to 50% the CO₂-emissions in the sinter plants consists in the use of alternative heat inputs via Waste Gas Recirculation and innovative solutions integrating the production of hot fumes in an external combustion chamber. To this end, the CRM pilot sinter station has been adapted to allow the production of hot fumes.

The promotion of the use of steel in solutions for the energy transition can be illustrated by our researches on renewable energy sources (PV, solar concentration, wind, etc) and on hydrogen production, transport and use, including the development of fuel cells. The latter includes optimising and upscaling on our pilot lines a coating technology on stainless steels bipolar plates. Indeed, the substitution of graphite by stainless steel for this bipolar plates offers great advantages in terms of cost and lifetime providing an optimised coating and associated industrial scalable roll-to-roll coating process can be developed.



Production of alternative fuels & reductants from waste



Sinter pilot station with hot fumes production for Very Low Sintering



Roll-to-Roll pilot line for upscaling the stainless steel bipolar plate coating for fuel cells

Infosteel is the steel construction sector's information and promotion centre, and its slogan is 'Together, for more steel in construction'. Its work is built around 3 core principles: connect - inform - inspire.

In 2020, it launched 'Score With Steel', a major campaign aimed at contractors and architects. The communication for this campaign was based on the principle of neuro-marketing and is largely conducted through social media.

The projects of the Steel Construction Competition are a vital source of inspiration. The 4 winners of the latest edition once again demonstrated the skill of the Belgian steel construction sector and the impressive application possibilities of steel in every market segment.

The 'Learning Lunches' (lunchtime webinars) created a platform where companies can use the Infosteel network to share the latest developments in the sector. As for information, large sections of the technical information about products and applications available on the Infosteel website have been completely revised.

To be able to do all this, close collaboration with the major segments of the key value chain is essential. Steel mills and steel traders have long been closely involved in Infosteel's activities. In 2020, special efforts were made to strengthen bonds with the steel construction sector.



4 magazines (online and printed) with numerous steel projects



Learning Lunches (lunchtime webinars)



Campaign 'Score With Steel'

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GSV is the professional organization representing the Belgian steel industry

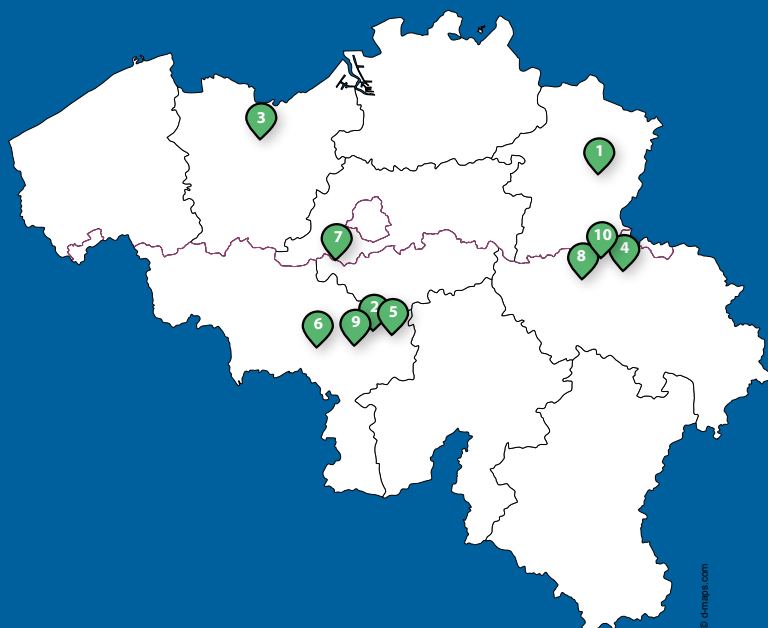
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	1 Aperam Genk - www.aperam.com
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