

# Belgian Steel in 2009

## A N N U A L R E P O R T



The year 2009 was particularly difficult for the steel industry. The financial crisis that erupted in the US in autumn 2008, quickly spread globally and plunged the world economy into the deepest recession since the thirties.

As three quarters of the steel consumption is related to construction, automotive markets and investment products - the very first sectors to suffer from the financial shockwave and the ensuing credit contraction -, the steel industry turned out to be worse off than other industrial segments.

The impact of the brutal deterioration of the world conjuncture varied depending on the zones. China - driven by huge economic incentive programmes focusing on the supply side - and, to a lesser extent, India, recorded even in 2009 an increase in production and consumption of steel. The CIS and the Middle East noted only a slight reduction or no change at all. On the contrary, the EU27, the US, Japan and South Korea suffered a major relapse, worsened by a stock crunch throughout the entire steel supply chain.

The European steel industry and the Belgian producers in particular dispose of a flexible operational model. This allowed for an immediate response to the collapsing demand. Activities were reduced by half to fit the new market realities. The capacity of a company to quickly adapt to changing situations and an increased elasticity of its cost factors are more than ever a prerequisite for competitiveness.

In recent months we have witnessed recovering stocks and a slight recovery of demand, which justified a gradual reactivation of the plants. More should follow, economic conditions permitting. However, the current fragile recovery does not allow as yet to stop any government aid programme.

The very tough international competition strengthens the conviction of the Belgian steel industry that it has to carry on into highly specialized products. To this end, it rests on innovation and R&D centres which enjoy international renown. They make it possible for the Belgian steel industry to consolidate its position in a sector facing growing overcapacity, particularly in Asia, and the resulting reappearance of surpluses and wicked competition.

Other factors also had a strong influence on the recent developments in the sector, particularly the whole of environmental commitments, the access to raw materials (iron ore, coke, scrap, alloying elements) and their cost development. The globalization of the steel business and the intermingling of economic zones illustrate the need for a level playing field for all steel producers so as to ensure that they comply with the rules of healthy competition.

Together with colleagues from other Member States, the Belgian steel producers earlier this year addressed a manifesto to the new European Commission. The document emphasizes the importance of the European steel industry for the downstream processing industry as well as for the EU consumers. They also invite the European governments to create an enabling environment for the sustainable development of the steel industry in Europe. This should be built around four pillars:

- An environment policy based on the consensus that all major producing countries should be on an equal footing in order



Robrecht Himpe  
Chairman

for the environmental goals to be achieved. The steel factories from the upcoming industrial nations are responsible for nearly two thirds of the sector's CO<sub>2</sub> emissions, so their full participation to an international agreement on climate change is essential. In December 2009, the EU steel sector was recognized as an industrial activity exposed to carbon leakage. Hence, awaiting the international agreement, the Directive on Emissions should ensure free allocation of all CO<sub>2</sub> rights to European steel producers, and this on the basis of realistic reference systems. The Belgian steel industry is one of the frontrunners worldwide, as it nearly halved its CO<sub>2</sub> emissions per ton steel over the last 30 years.

- The strict application of trade defence measures to stop the rise of protectionist reflexes and to preserve the openness of markets and the access to raw materials. The EU is the most open area for trade. The region's system combating deviating practices is entirely in conformity with the provisions of the WTO. It must preserve healthy competition, turn down false competition and discourage those who are tempted by the latter. The EU must also act decisively against the planned joint venture of iron ore producers, which forms an excessive concentration of power. Without the slightest justification this concentration already led to abusive increases in ore prices.
- Greater support for R&D in order to accelerate the implementation of technological breakthroughs. This will allow for instance alternative ways for the reduction of iron ore, or the implementation of carbon capture and storage (CSS). R&D process and product is a key factor in the innovation strategy, essential for maintaining the competitiveness of the Belgian and European steel industry. The development and commercialization of products offering new functionalities and optimising the environmental characteristics of steel will offer concrete solutions to the consuming industries.
- Increased legal certainty, to which steel companies and others aspire, requires regulatory simplification and stabilization. Self-regulation, the alignment and rationalization of European and Belgian legislative bodies and the consequent execution of preliminary impact studies respond to this concern. Reaching this objective will also be facilitated when priorities are better defined, previous efforts that proved technically feasible are taken into account, and measures are spread in time considering the overall context.

To strengthen its presence on the Belgian scene and have the industry's voice better heard, the Belgian Steel Federation signed in September 2009 a cooperation protocol with the Federation of the Glass Industry (VGI/FIV) and the Federation of Paper and Card Board Users (FETRA).

The resulting platform "inDUFed- Sustainable Goods" became operational in January 2010 and reflects the particular characteristics of the firms in the three sectors, namely that they produce renewable and recyclable goods.



# Social Affairs



## An active social dialogue

In line with the inter-professional negotiations, the social partners of the steel industry concluded a new sectoral agreement in spring 2009, covering the period 2009-2010.

This framework agreement provides guidelines, makes recommendations, creates or renews joint working groups and as such it contributes to the consolidation of the sectoral social culture, taking care not to compromise on the use of social dialogue and negotiations at company level which remain the pillars of social consultation.

The economic crisis imposes a rapid adjustment of the production rate to market fluctuations, which were particularly deep in 2009. Hence the need for an open and constructive social dialogue that, on the one hand, views an appropriate reallocation of the available labour force and, on the other hand, prepares for the challenges ahead by emphasizing the importance of continuous training. The latter is of particular interest seen the highly competitive international context in which the Belgian steel companies operate.

The active social dialogue also gives absolute priority to optimizing health & safety at work for all employees, including the personnel of external companies.



## Health & safety on the workplace

The culture of health & safety at work stems from the interaction between individuals, their job and specific organizational factors. The careful analysis of potential risks at the workplace and a concerted professional management constitute the foundation of an efficient prevention policy.

Reducing risks and preventing accidents and occupational diseases, for instance by introducing a safety culture at every step of the hierarchy and with regards to all activities, represent a constant commitment to the Belgian steel companies.

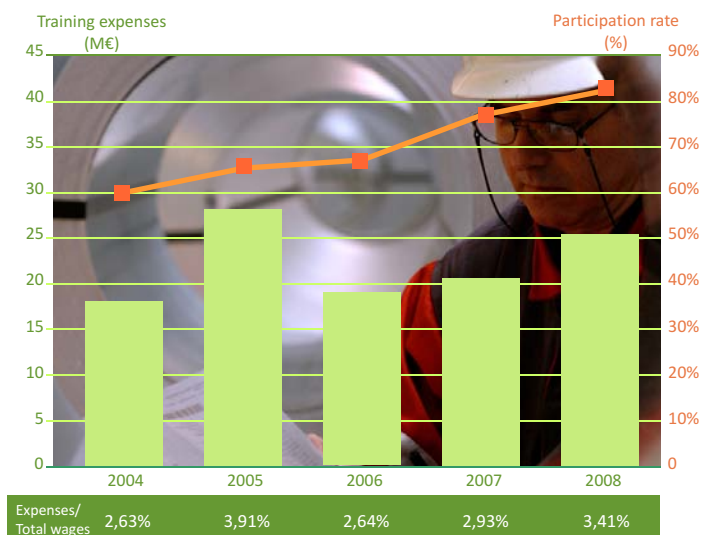
The training programmes put emphasis on the employees' vigilance and aim at the implementation of proper working methods, the unconditional observance of the established safety procedures and the regular evaluation of the results.



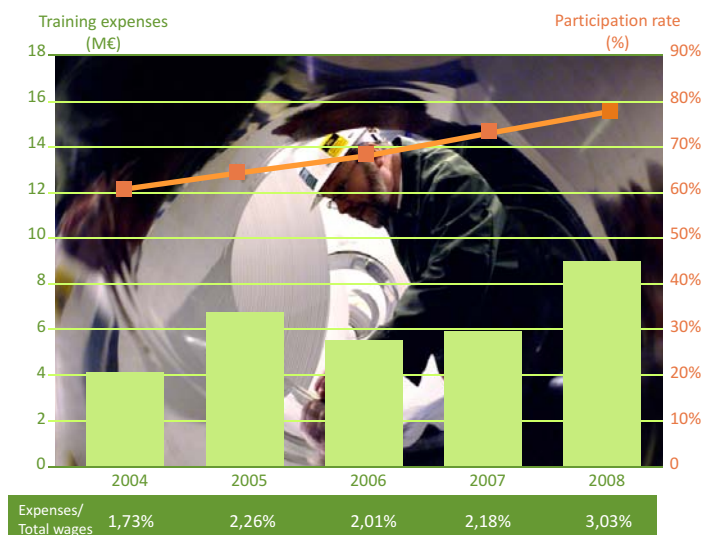
## Development of knowledge and vocational training: an economical and a social challenge

The development of knowledge and know-how, as well as vocational training are essential to maintain the competitiveness of the enterprises and the opportunities for employment. A vibrant training policy facilitates the pro-active responsiveness to change, supports the efforts to innovate, and stimulates the cognitive capacities of the employees.

TRAINING (PC104)



TRAINING (PC210)





# Production - Consumption



## 2009: a contrasting evolution in global steel production

World crude steel production started to drop in autumn 2008 and declined further on in the first half of 2009, but recovered gradually since then. Worldwide, some 1.224 Mt of steel were produced, representing a decrease of about 8% y/y. The drop was particularly severe in most OECD countries. Facing the collapse in local demand, the producers were required to cut back production drastically. In the EU27 139 million tonnes were produced, nearly 60 million less than the previous year. The decrease was of similar magnitude in the United States and Japan, but it was less sensitive in Russia and Brazil. China and India for their part have continued their advance. As a result, the two countries now represent more than 51% of the world's steel production.

	Mt	2009/2000	2009/2008	IV09/IV08
EU27	138	-28%	-30%	8%
United States	58	-43%	-36%	14%
Japan	88	-18%	-26%	1%
Brazil	27	-5%	-21%	17%
Russia	60	1%	-13%	43%
South Korea	49	13%	-9%	12%
India	60	124%	4%	11%
China	568	342%	14%	34%
World	1224	44%	-8%	32%

To cope with the sharply declining demand, four out of the five Belgian blast furnaces were temporarily halted. One of them restarted in the summer 2009 and another one in the spring 2010. Accordingly, the volume of crude steel produced in Belgium dropped to 5,6 million tonnes in 2009, i.e. a decrease of 47% y/y. With regards to the electric arc furnaces, known to be more flexible, a drop of 28% y/y was observed. The production of stainless steel was 1,05 million tonnes, representing a decrease of 29% compared to 2008.



## Steel demand greatly suffered from the global economic downturn

In 2009 - in both the EU and the other OECD countries - all steel consuming sectors were confronted with the deterioration of their economic environment. The decline was particularly marked in the automotive, mechanical and metal fabrication & pipe industry. The construction industry also suffered, more particularly

the non-residential sector. During the first three quarters of the year, the steel consumption in the EU fell more than 40%, while at annual basis the drop was about 35%. The expected recovery will be gradual, starting from very low levels. Globally, apparent steel consumption decreased nearly 7%. This average however masks an increase of about 18% in the BRIC countries (Brazil, Russia, India, China) and a decrease of about 27% in other countries, -41% in the United States and -32% in Japan.



## The EU27 remained an open economic zone and returned to its exporter status

In 2009, and this for the first time since 2005, the EU27 again recorded a positive trade balance for steel (8,1 million tonnes of finished products). However, this situation resulted mainly from a 47% decrease of imports due to the collapse of internal demand and the weak prices. China, that had been the first exporter to the EU for the two preceding years, ranked behind Russia, Turkey and Ukraine in 2009. Despite the protectionist tendencies that emerged during the crisis, the EU remained an open area without customs duties.





# Sustainable Development



## **Sustainable material management: Recyclability of steel**

One of the most remarkable characteristics of steel is its capacity to be recycled over and over again without loss of chemical or physical properties. Steel, once produced, enters into a closed material cycle. It becomes part of consumption or investment products that will eventually be recycled back to steel. This feature allows for major savings in raw materials and energy, which in turn leads to reduced CO<sub>2</sub> emissions.

Sustainability is also a characteristic of steel by-products. Iron and steel slag for instance, inevitably produced at different points in the steel production process, is used in various applications such as the production of cement, as construction material or as fertilizer.



## **Climate change: Ensure the Level Playing Field**

The lack of results from the Copenhagen conference in December 2009, which was heavily dominated by the United States and China, demonstrates the extent of the remaining obstacles to an international climate change agreement. Looking ahead to the next meeting in Cancun in December 2010, the EU - under Belgian Presidency - must regain its credibility and therefore review its policy towards a pragmatic approach shared by all Member States.

To reach a global agreement on climate change, it is imperative that all states and regions commit to comparable obligations. A critical mass of companies from relevant industry sectors should be involved.

Meanwhile, the industries that are exposed to global competition, such as steel, should be adequately protected against the risk of relocations triggered by costs increases linked to the EU obligations. To this end, the post 2012 emission trading directive allocates free CO<sub>2</sub> allowances for exposed sectors based on benchmarks. These should be realistic. The steel industry in particular should be granted sufficient emission rights for its process gases, which represent up to 80% of its emissions. If not, it will be impossible to recover these gases in an optimal way, for instance for power generation.



## **Industrial emissions: Towards ambitious and realistic goals**

As it is the case in the current system, the new directive on industrial emissions which is now under discussion should provide flexibility with regards to the specific environmental factors, location and technical characteristics of installations. Consequently, the steel industry is opposed to any system that denies these individual considerations, such as the possible imposition of EU wide minimum requirements that would give no possibility of differentiation.

Like most other industries, the steel industry is also opposed to the introduction of an emission trading system for nitrogen oxide (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>). Indeed, these pollutants relate to local problems that are concentrated in certain regions of Europe.



## **Energy: Ensure supply**

The optimization of energy consumption necessitates a stable energy supply at competitive conditions. Therefore it is essential to limit additional costs, taxes and levies on electricity in order to ensure that the price level remains comparable to that of neighbouring countries.

One of the main additional costs of electricity is linked to the green energy obligations, established under the certification systems introduced by the Regions. The approach should be based on the technical and economical feasibility assessment of the alternative power sources that are wind, solar and biomass.

An efficient framework for renewable energy and a confirmation of the importance of nuclear energy, reason for which the Government has extended the duration of the first nuclear power plants, are indispensable prerequisites for ensuring a better supply.



# Steel Information and Promotion



[www.infosteel.be](http://www.infosteel.be)

The activities of Infosteel focus on stressing the advantages of steel as an essential material contributing to the good environmental performance of buildings and the quality of the environment. This promotional mission is materialized through the organization of professional activities and dissemination of technical information for various audiences.

The biennial 'Journée Construction Acier 2009' is the steel sector's largest event in the Grand Duchy of Luxembourg, and it receives much attention in the media. The event offers a floor to conferences that focus on sustainability issues and the energy efficiency challenge in relation to steel use in buildings. The event is adorned by the handing over of the trophies of the Steel Construction Competition.

The future of steel use for constructions is prepared at universities and colleges. In this context, Infosteel organised a workshop for teachers on the theme 'Building with Steel' and on the Bologna Declaration. The

Student Steel Trophy 2008-2009 crowned students from departments of architecture and civil engineering for their innovative application of steel in design.

Infosteel is a player in the European steel promotion network and increased its cooperation activities across the borders with other Independent Promotion Organisations for steel (IPOs). Infosteel, founding member of the IPO Steel Network (ISN), united the European players in the steel industry. The ISN will develop, among others, a communication plan on the durability of steel and will constitute an efficient monitoring system for European standards.



# Centre For Research in Metallurgy



[www.crm-eur.com](http://www.crm-eur.com)

- CRM is a Belgian collective Research Centre for the Iron and Steel industry as well as for the non-ferrous metals industry, with worldwide activities and is ISO 9001 certified.
- Closing the gap between science and market, turning inventions into products & value creation are the main missions of CRM.
- To fulfil its mission, the CRM is organised in 4 departments with 13 key activity clusters:
  - the **Sustainable production & upstream processes** department (Fig. 1 & 2)
  - the **Surface engineering** department
  - the **Product development** department (Fig. 3)
  - the **Advanced materials, Solutions & Sensors** department.

These project oriented departments are supported by two transversal teams:

- **Metal science** for chemical, metallurgical and surface characterisations
- **Operational engineering** in charge of design, dimensioning, construction, automation and implementa-

tion of advanced technical solutions on CRM pilot lines and in steel plants.

- The CRM researches are financed by contributions from the Active Members (ARCELORMITTAL and CORUS TATA) and the Associate Members as well as by grants from the Public Authorities (Belgian Regions and European Community).



Fig 1  
Supermagnag sensor at ArcelorMittal Ghent:  
On-line measurement of sinter quality



Fig 2  
Rotary hearth furnace: Pilot campaign on self-reducing briquettes made from shredder residues at CRM Liège



Fig 3  
Continuous Hot Rolling trials on 2 stand at CRM Ghent

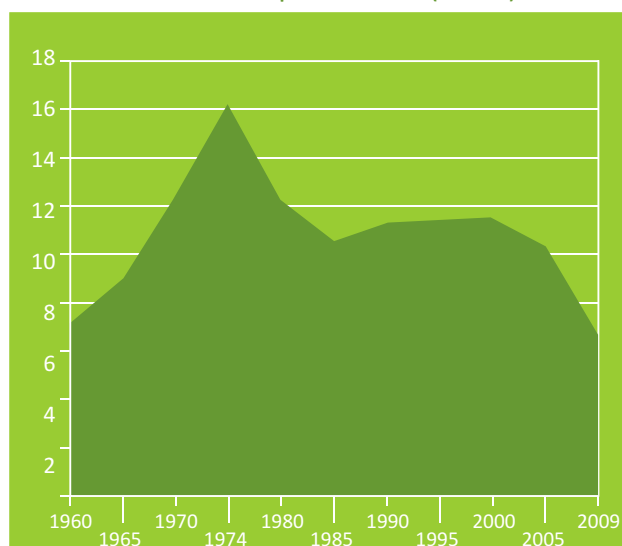


# Belgian Steel in Figures

Pig iron and crude steel production (in kt)

	Pig iron	Crude steel		Total
		BOF	EEAF	
2001	7732	8086	2655	10741
2002	7988	8417	2905	11322
2003	7813	8309	2805	11114
2004	8224	8812	2885	11697
2005	7254	7776	2644	10420
2006	7516	8172	3458	11631
2007	6577	7147	3545	10692
2008	6977	7407	3265	10673
2009	3087	3288	2347	5635

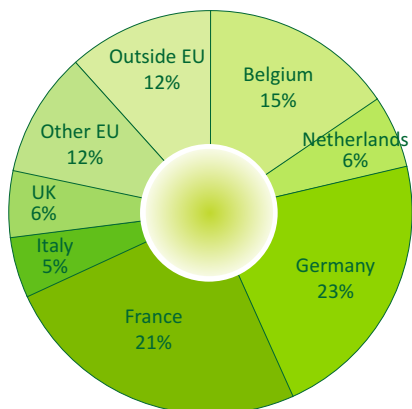
Crude steel production (in Mt)



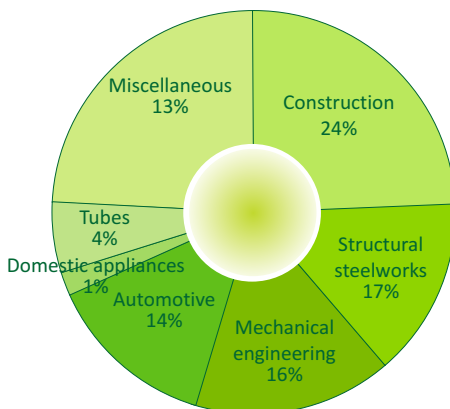
Deliveries of steel products (in kt)

	Total	Coils	Heavy plates	Cold rolled coils	Coated plates	Wire rod	of which Stainless
2002	11300	4210	730	1447	3684	825	629
2003	10544	3881	725	1463	3302	780	811
2004	11928	4287	816	1755	3928	709	982
2005	10801	3859	765	1560	3371	587	946
2006	12532	4462	791	1764	3916	772	836
2007	11972	4104	760	1603	3881	900	703
2008	11884	4378	741	1580	3526	878	659
2009	7412	2259	428	1103	2631	728	467

Deliveries by destination



Deliveries by sector



Other 2009  
sectoral key figures

Employment on 31/12/2009  
**14472 persons**

Turnover (e)  
**5300 M€**

Value added (e)  
**1000 M€**

Export (e)  
**4500 M€**



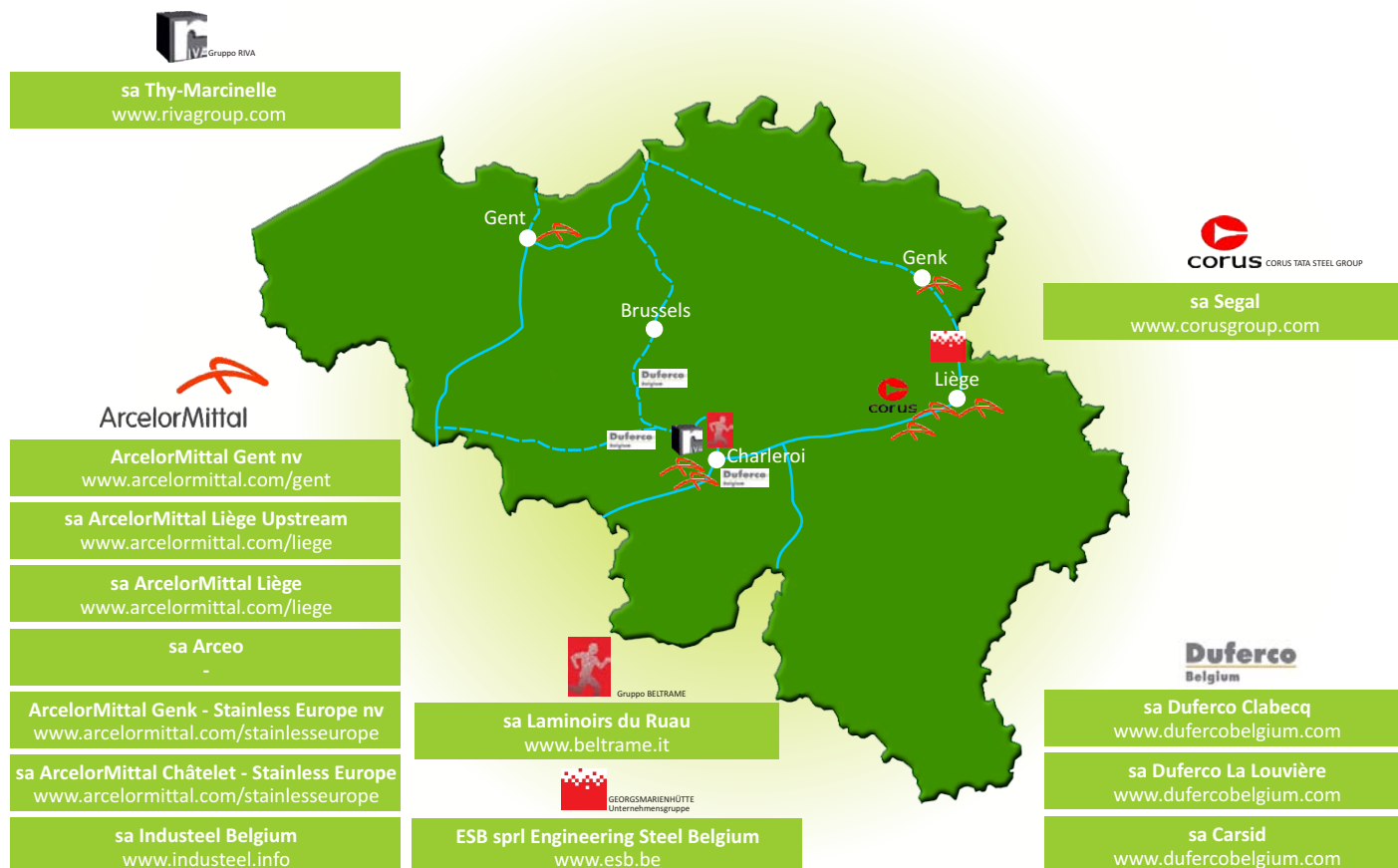
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GSV is the professional organization representing the Belgian steel industry.

on 01.01.2010

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