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# STEEL

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MAY **2019**





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# A REVIEW OF SOUTH AFRICA'S STEEL SECTOR

The material contained in this report was compiled by Martin Zhuwakinyu and the Research Unit of Creamer Media (Pty) Ltd, based in Johannesburg.

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Report edited by Sheila Barradas, David Shepherd and Ria Theron.

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# LIST OF ABBREVIATIONS AND ACRONYMS

AMSA	ArcelorMittal South Africa
BRP	business rescue practitioner
CIPC	Companies and Intellectual Property Commission
CITT	Canadian International Trade Tribunal
Cisco	Cape Town Iron and Steel Works
CWI	Consolidated Wire Industries
DIIS	Department of Industry, Innovation and Science
DMIC	Delhi-Mumbai Industrial Corridor
DTI	Department of Trade and Industry
EAF	electric arc furnace
EU	European Union
GFSEC	Global Forum on Steel Excess Capacity
GDP	gross domestic product
HCC	hard coking coal
IBEF	India Brand Equity Foundation
IRL	International Resources Limited
ISSF	International Stainless Steel Forum
Itac	International Trade Administration Commission of South Africa
met coal	metallurgical coal
MEIBC	Metal and Engineering Industries Bargaining Council
MIHBV	McSteel International Holdings
Nafta	North American Free Trade Agreement
NAB	National Australia Bank
Nersa	National Energy Regulator of South Africa
NPA	negotiated pricing agreement
Numsa	National Union of Metalworkers of South Africa
OECD	Organisation for Economic Cooperation and Development
PCI	pulverised coal injection
PPS	price preference system
SDF	Steel Development Fund
Sassda	Southern African Stainless Steel Development Association
Seifsa	Steel and Engineering Industries Federation of South Africa
SIOC	Sishen Iron Ore Company
SSCC	semisoft coking coal
SOC	State-owned company
USMCA	US-Mexico-Canada Agreement
worldsteel	World Steel Association
WTO	World Trade Organisation



# KEY DEVELOPMENTS

**June 2018:** In retaliation against the US decision to terminate Canada's and Mexico's exemption from the Section 232 tariffs on steel and aluminium imports imposed in March 2018, Mexico introduces tariff duties of 25% on a range of US steel products and of 20% on pork imports, as well as tariffs of 20% to 25% on other products, including apples, potatoes, cheese and bourbon.

**June 2018:** Following the US's imposition of steep import tariffs on aluminium and steel products in March 2018, the European Union introduces 'rebalancing' tariffs on a range of US imports worth \$3.24-billion.

**June 2018:** South Africa's Competition Tribunal reaches a R40-million settlement agreement with Cape Gate, following the steelmaker's admission of its involvement in price fixing, dividing markets and collusive tendering concerning light galvanised wire, nails, wire and various other products.

**July 2018:** Chinese President Xi Jinping comes to South Africa on a State visit, during which unnamed Chinese State-owned companies sign agreements to build a \$10-billion metallurgical complex at the Musina-Makhado Special Economic Zone, in Limpopo, which will produce steel and other alloys.

**September 2018:** Chinese Assistant Commerce Minister Ren Hongbin states that the Asian country intends to reduce its steelmaking capacity by 30-million tonnes during 2018, adding to the 120-million tonnes eliminated from 2014 to 2017.

**September 2018:** The chief commissioner of South Africa's International Trade Administration Commission, Meluleki Nzimande, tells Parliament's Portfolio Committee on Trade and Industry that, by the end of 2017, steelmaker ArcelorMittal South Africa had invested R1.78-billion of the R4.60-billion it had committed to investing over five years to upgrade its production facilities.

**October 2018:** Following representations by the South African government against the tariffs imposed on steel and aluminium imports by President Donald Trump in March 2018, the US government announces that it has granted tariff exemptions on 161 aluminium and 36 steel products from South Africa.

**December 2018:** Mining major Anglo American resumes production at its Minas-Rio iron-ore mine, in Brazil, following a halt since March 2018, when leaks were detected in the 529 km slurry pipeline

that conveys iron-ore to the Atlantic Port of Açú. The resumption of operations will add supply to the seaborne iron-ore market.

**December 2018:** Brazilian miner Vale announces its plans to invest \$770-million in a project to expand its 90-million-tonne-nameplate-capacity S11D Eliezer Batista Complex, in Pará state, to 100-million tonnes a year from 2022.

**December 2018:** Canadian Foreign Minister Chrystia Freeland contends that the steel and aluminium import tariffs imposed by the US in March 2018 contradict a key component of the US-Mexico-Canada Agreement focused on automotive content and must, therefore, be removed before the trilateral trade deal is ratified by the three countries' legislatures.

**January 2019:** ArcelorMittal South Africa reopens the electric arc furnace at its Vereeniging mill, in Gauteng, on the back of improved conditions in the long steel products market and a desire to reduce operational complexities at Newcastle, in KwaZulu-Natal, where structural complexities are undermining its competitiveness. The mill was closed in 2015, at the height of the steelmaker's financial and operational difficulties.

**February 2019:** ArcelorMittal South Africa warns that the rising cost of electricity poses a risk to its nascent financial recovery and long-term competitiveness.

**February 2019:** ArcelorMittal South Africa announces that it has been notified of plans to prosecute it over alleged transgressions of its emission licence at Vanderbijlpark, in Gauteng. If the matter proceeds to court and the company is convicted, a fine of up to R15-million will be imposed, according to the relevant legislation.

**February 2019:** Concerned about the impact of electricity price increases, ArcelorMittal South Africa announces its plans to petition the National Energy Regulator of South Africa for tariff relief from State-owned power utility Eskom for its operations.

**February 2019:** Following a review of 226 iron-ore tailings dams in Brazil, research and consulting firm Wood Mackenzie states that 35 of the facilities could potentially be affected by a government ban on upstream tailings dams – similar to the one that collapsed at Vale's Córrego do Feijão mine, in Minas Gerais, in January 2019 – as they are classified as 'upstream' or 'construction method unknown'. Vale has indicated that it will halt production totalling





40-million tonnes a year as it decommissions its upstream tailings dams. Should more dams be condemned, the reduction in seaborne iron-ore supply will be aggravated.

**February 2019:** South Africa's Parliament approves the long-delayed Carbon Tax Bill, paving the way for the legislation to take effect on June 2, 2019.

**February 2019:** Finance Minister Tito Mboweni announces that the South African government intends to introduce an export tax on scrap metal that will replace the existing price preference system, in terms of which scrap intended for export must first be offered to domestic consumers at a discount of 20% to 30% to an internationally benchmarked price.

**February 2019:** Spain's Acerinox group announces during its 2018 results presentation that Columbus Stainless, its 66%-owned South African subsidiary, benefited from a recovery in apparent consumption in the domestic market, helped by increasing demand from the automotive and container tank industries.

**March 2019:** The National Union of Metalworkers of South Africa announces its intention to stage a strike at ArcelorMittal South Africa over the alleged ongoing use of labour brokers.

**November 2019:** The scheduled commissioning date for Columbus Stainless's 110-t-capacity ladle furnace, which will improve the productivity of the melting shop while reducing energy consumption and carbon dioxide emissions.



Picture by Creamer Media





# GLOBAL STEEL MARKET

The \$900-billion-a-year global steelmaking industry continues to have excess capacity, putting many producers under pressure. While installed capacity declined during 2016 and 2017 on the back of plant closures and limited capacity growth, the Organisation for Economic Cooperation and Development (OECD) estimates that global steelmaking capacity, in nominal crude terms, remained nearly unchanged in 2018, at 2.23-billion tonnes.

The installed steelmaking capacity – which totalled 1.66-billion tonnes in 2018 – exceeds demand by more than 500-million tonnes. Worryingly, the underlying steel demand trend remains subdued, with growth expected to average 1.10% a year from 2017 to 2035, according to the World Steel Association (worldsteel). In a report published in September 2018, the Global Forum on Steel Excess Capacity (GFSEC) stated that it expected the gap between steelmaking capacity and demand to continue to be significant and of a magnitude that threatened the industry's long-term viability for many years.

The GFSEC, whose 33 member countries – all Group of 20 members and 13 interested OECD members – account for about 90% of the world's steel production capacity. The organisation was established in 2016 to share information on crude steel capacity developments and government policies that impact on steelmaking capacity, including market-distorting subsidies and other support measures. It stated in its September 2018 report that sizeable capacity reductions had occurred from 2014 to 2017. China, which took a market- and law-based approach, reported the greatest reduction of 120-million tonnes, or 10.60%, during this period. Commerce Assistant Minister Ren Hongbin was

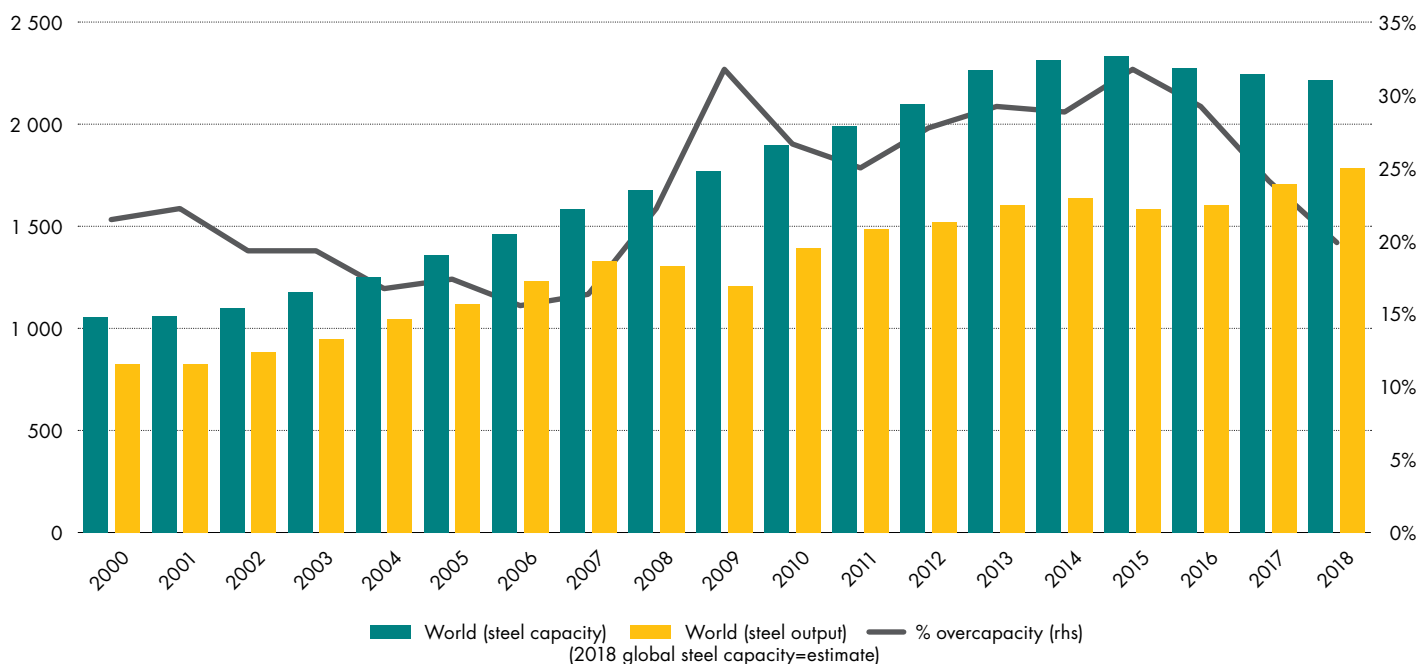
reported by the media in September 2018 as saying that the country expected to have eliminated a further 30-million tonnes of capacity by the end of that year. Other significant reductions occurred in South Africa, where 700 000 t (6.80%) of capacity was eliminated, and the European Union (EU), whose capacity is now 12-million tonnes (5.30%) lower than its pre-2014 level.

However, other steelmaking countries registered increases from 2014 to 2017, notably India and Brazil, which increased capacity by 25-million tonnes (22.60%) and four-million tonnes respectively. Mexico increased its steelmaking capacity by three-million tonnes (11.10%), Indonesia by one-million tonnes (11%) and Turkey by one-million tonnes (1.90%). The GFSEC, however, notes that these five countries reduced capacity from 2016 to 2017.

Despite the reductions recorded from 2014 to 2017, global steelmaking capacity in 2017 was 313-million tonnes higher than in 2010 and 1.10-billion tonnes higher than in 2000, indicating that capacity growth is widely outpacing the increase in demand. The OECD Steel Committee noted in March 2019 that the situation was being driven by low economic growth globally and slowing demand for the alloy. According to the GFSEC, a compounding factor is declining steel intensity – the amount of steel required to generate one unit of gross domestic product (GDP) – which is expected to continue, owing to structural trends such as the move towards more efficient use of materials that will require lighter and stronger steel products. The GFSEC believes the world's ageing population and the increasing degree of digitalisation are also expected to weigh on steel demand, although there will be regional variations.



## Overcapacity in global steel supply (in million tonnes)



Source: ABN AMRO

Should planned steel plants, some in regions where overcapacity is prevalent, become operational, global steelmaking capacity could increase by 4% to 5% between 2019 and 2021, unless some of the existing capacity is eliminated, according to the OECD.

Owing to the overcapacity situation, about half of the world's steel manufacturers were operating at profitability levels of 7.50% in 2017, with one-quarter operating at profitability levels lower than 3.70%, while more than 16% were lossmaking, according to the OECD's 'Steel Market Development' report for the fourth quarter of 2018, which was published in January 2019.

Meanwhile, the 25% and 10% tariffs imposed in March 2018 by US President Donald Trump on steel and aluminium imports respectively prompted a global trade war, with countries, including China, imposing retaliatory tariffs on US imports and the EU introducing steel import quotas to protect the bloc's own steelmakers from imports that may be diverted from the US in the aftermath of Trump's protectionist measures.

## PRODUCTION

Crude steel production from the 64 countries that report to worldsteel and account for 99% of global production totalled

1.81-billion tonnes in 2018 as output increased in all regions except the European Union (EU).

Top 10 steel-producing countries		
Country	2018	2017
China	928.30-million tonnes	870.90-million tonnes
India	106.50-million tonnes	101.50-million tonnes
Japan	104.30-million tonnes	104.70-million tonnes
US	86.70-million tonnes	81.60-million tonnes
South Korea	72.50-million tonnes	71-million tonnes
Russia (e)	71.70-million tonnes	71.50-million tonnes
Germany (e)	42.40-million tonnes	43.30-million tonnes
Turkey	37.30-million tonnes	37.50-million tonnes
Brazil	34.70-million tonnes	34.40-million tonnes
Iran (e)	25-million tonnes	21.20-million tonnes

Source: World Steel Association  
e – estimate

Asian production, at 1.27-billion tonnes, represented a 5.60% increase on 2017, with the contribution from China, the world's largest producer, being 928.30-million tonnes. The Australian government's Department of Industry, Innovation and Science (DIIS) stated in October 2018 that it expected Chinese crude steel production to peak in 2018 and contract





to 861-million tonnes in 2019 and 842-million tonnes in 2020 as the country's government enforces stricter environmental regulations, supply-side reforms reduce some loss-making capacity and measures to cut debt are implemented. However, BHP, the world's third-largest supplier of iron-ore, a key ingredient in the steelmaking process, disagrees with the DIIS's view, insisting that Chinese steel production will trend upwards until the middle of the next decade.

Meanwhile, according to worldsteel, Indian crude steel production in 2018 increased by 4.90% year-on-year to 106.50-million tonnes, resulting in the country replacing Japan as the world's second-largest producer of the alloy. Responding to growing demand from the construction, automotive, consumer durables and capitals sectors, the Indian steelmaking industry has invested heavily in capacity expansion and new projects over the past few years and continues to do so. The industry has been boosted by the Indian government's National Steel Policy of 2017, in terms of which preference is given to locally manufactured steel and iron products for government projects, while importers of intermediate steel products or raw materials can claim benefits from government if they add 15% value to the imported product. The Indian government forecasts that, owing to this policy, steelmaking capacity will increase to 150-million tonnes a year by 2020 and 300-million tonnes a year by 2030. This will require the investment of about \$156-billion over the next 11 years.

The Indian steelmaking industry has also been boosted by the imposition of a 30% ad valorem export duty on iron-ore of all varieties except pellets; a reduction from 7.50% to 2.50% in the basic customs duty on plant and equipment required for the initial establishment or expansion of iron-ore pellet plants and iron-ore beneficiation plants; and the halving of the import duty on steel-grade dolomite and limestone.

Highlighting the continuing growth in domestic steel demand, which will continue to spur crude steel production, the India Brand Equity Foundation (IBEF) stated in June 2018 that the automotive manufacturing industry was forecast to increase its GDP contribution from \$74-billion in 2015 to between \$260-billion and \$300-billion by 2026. The IBEF added that it expected the capital goods sector's share of domestic steel consumption to increase from 11% currently to between 14% and 15% by 2026, with the infrastructure sector's share increasing from 9% to 11% over the same period. Steel used in the construction of more modern and private airports was expected to increase by more than 20% over the next few years.

The IBEF added that further domestic demand for steel would come from the railways sector, where investment of

\$4.90-billion has been earmarked for 2018 and 2019; the burgeoning oil and gas sector; and the power sector, where the addition of 100 GW of generation capacity is targeted under the country's thirteenth Five Year Plan (from 2017 to 2022). Demand will also be driven by policies to increase per capita steel consumption in rural India from 12.11 kg currently to 14 kg by 2022.

Elsewhere in Asia, Japan produced 104.30-million tonnes of steel in 2018, while South Korea produced 72.50-million tonnes, according to worldsteel.

In North America, crude steel production totalled 120.50-million tonnes in 2018 – 4.10% higher than in 2017 – with the US's contribution increasing by 6.20% year-on-year to 86.70-million tonnes. South American countries produced 44.30-million tonnes, 1.30% higher than the 2017 output, with Brazil, the region's largest producer, accounting for 34.70-million tonnes.

Production in the Commonwealth of Independent States increased marginally – by 0.30% – to 101.30-million tonnes, with the Russian Federation contributing 71.70-million tonnes, a year-on-year increase of 0.30%, and the Ukraine 21.10-million tonnes, a 1.10% decline.

Middle Eastern countries produced 38.50-million tonnes in 2018, up 11.70% on 2017, while steelmakers in Africa increased their output by 7.20% year-on-year to 16.10-million tonnes, with South Africa's contribution increasing by 0.40% year-on-year to 6.33-million tonnes. Egypt, Africa's largest producer, increased its output from 6.90-million tonnes in 2017 to 7.80-million tonnes in 2018.

The EU, the only region to have posted a decline in 2018, contributed 168.10-million tonnes to the world's crude steel production, which was 0.30% lower than the bloc's 2017 volumes. The main contributor to the decline was Germany, whose 42.20-million output was 2% lower than in 2017. France's 15.40-million tonnes and Spain's 14.30-million tonnes represented declines of 0.70% and 0.10% respectively. Italy, however, increased its output by 1.70% to 24.50-million tonnes.

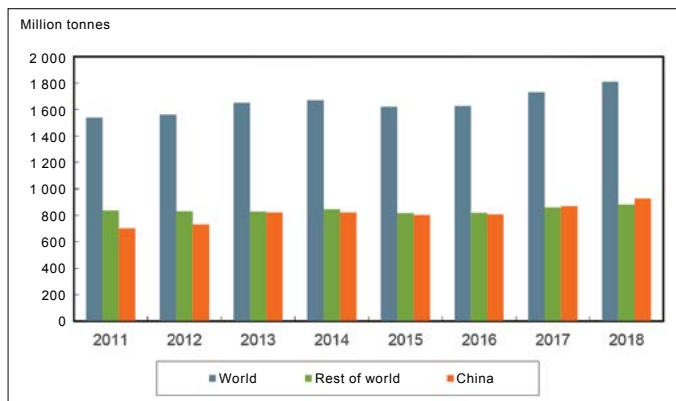
The DIIS expects steel production in the EU to increase by 1.30% a year from 168-million tonnes in 2017 to 175-million tonnes in 2020, in line with increased consumption in the bloc.

Of the other European producers, Turkey also posted an output decline – of 0.60% – to 37.30-million tonnes. The reduction could have been deliberate, according to worldsteel general director Edwin Basson, who told an interviewer in



January 2019 that the country could have calculated that this level of production was ideal, given the political challenges in the region, while the tariffs imposed by the US on Turkey could also have played a role.

### Global crude steel production – 2011 to 2018



World Steel Association

## CONSUMPTION

In its Short Range Outlook (SRO) released in April 2019, worldsteel forecasts that steel demand in 2019 will reach 1.74-billion tonnes, up 1.30% on 2018, with a further increase to 1.75-billion tonnes in 2020. However, a deceleration in demand from China, the world's largest steel consumer, coupled with a slowing global economy, uncertainty concerning trade policies and the political situation in many regions could pose a downward risk to this forecast.

Chinese demand – which was somewhat buoyed by mild government stimulus measures in 2018, which are likely to heighten in 2019 – is forecast by worldsteel to post a minor contraction in 2020 as the effects of the stimulus measures subside.

Elsewhere in Asia, Indian steel demand, having overcome the shocks of demonetisation and a Goods and Sales Tax, is set to increase at a faster rate from the second half of 2019, after general elections in the country. The Indian steel-consuming sector has become one of the few bright spots for the world steel industry in what is forecast to be a lower growth era. Per capita steel use in the country has grown in recent years to about 66.20 kg, which, while being significantly above its historical level, is about one-third of the world average of 212.30 kg in 2017. This suggests huge unrealised potential for steel use in the Asian country.

In recent years, India has been attempting to spur on steel demand through an extensive reform agenda to clear institutional bottlenecks, as well as an infrastructure development

programme, which is ongoing. Among the major infrastructure initiatives is the Delhi-Mumbai Industrial Corridor (DMIC) project, which aims to develop industries between the capital city of Delhi and the financial hub of Mumbai. This is intended to expand India's manufacturing and services sectors using the 1 500 km DMIC as the backbone, with an investment of \$100-billion targeted. Although the DMIC project has suffered setbacks since its launch more than a decade ago, current Prime Minister Narendra Modi has been keen to progress it, with the Hindustan Times newspaper reporting in November 2018 that \$2-billion worth of projects had been completed.

The second driver of India's accelerating steel consumption is the continued growth of the construction sector on the back of strong housing demand, especially low-cost accommodation.

The other factors behind India's steel consumption growth include initiatives to connect states through waterways to reduce logistics and transport costs; the Smart Cities initiatives, which aims to boost urban infrastructure development; the Made in India scheme, which aims to transform India into a global design and manufacturing hub; and the drive by some of the country's states to develop small-vehicle manufacturing and ancillary industries targeting the export market.

Steel consumption in developed economies, which increased by 1.80% in 2018, following growth of 3.10%, is expected to decrease by 0.30% in 2019 and 0.70% in 2020, according to worldsteel's latest SRO, which states that this forecast reflects the deteriorating global trade environment.

In Middle East, economic diversification in Gulf Cooperation Council States in response to a low price environment has had a detrimental impact on construction activity, thus affecting steel demand in the region, which worldsteel expects to continue to decline in 2019, with a minor recovery in 2020. Elsewhere in the region, demand in Iran is also forecast to contract in 2019 as the reinstatement of US sanctions causes a recession in that country.

The prospects for North Africa, however, are much brighter, with Egypt recovering strongly after the structural reforms of 2017. Other North African economies are also expected to show resilient demand growth, backed by strong investment activities.

Meanwhile, despite improved oil prices, worldsteel states that steel demand in Russia is expected to be constrained by structural issues, while the growth outlook for Ukraine is stable and improving, supported by domestic consumption. In Turkey, a currency crisis in 2018 led to a contraction in



## Top 10 steel-using countries

Country	2018	2019 (f)	2020 (f)
China	835-million tonnes	843.30-million tonnes	834.90-million tonnes
US	100.20-million tonnes	101.40-million tonnes	101.70-million tonnes
India	96-million tonnes	102.80-million tonnes	110.20-million tonnes
Japan	65.40-million tonnes	64.70-million tonnes	64.20-million tonnes
South Korea	53.60-million tonnes	53.40-million tonnes	54.10-million tonnes
Russia	41.20-million tonnes	41.60-million tonnes	42.20-million tonnes
Germany	40.80-million tonnes	40.40-million tonnes	41-million tonnes
Turkey	30.60-million tonnes	29.10-million tonnes	31.40-million tonnes
Italy	26.40-million tonnes	26.70-million tonnes	27-million tonnes
Mexico	25.40-million tonnes	25.80-million tonnes	26.10-million tonnes

Source: World Steel Association Short Range Outlook April 2019

f – forecast

steel demand, which worldsteel expects to continue into 2019, with some stabilisation in 2020.

## IMPACT OF TARIFFS ON US STEEL AND ALUMINIUM IMPORTS

Following an investigation undertaken in terms of the rarely used Section 232 of the US Trade Expansion Act, President Donald Trump imposed import duties of 25% on steel products and 10% on aluminium products in March 2018 to protect US jobs as he pursued his America First policy. This development invoked worldwide condemnation and prompted some countries to impose retaliatory tariffs and safeguard measures. The new tariffs also triggered complaints against the US to the World Trade Organisation (WTO) and the North American Free Trade dispute panels.

The US's North American neighbours were initially spared the new tariffs pending the outcome of the negotiation of the North American Free Trade Agreement (Nafta) but that exemption was lifted in June 2018. The US-Mexico-Canada Agreement (USMCA), which replaced Nafta and eliminated nearly all tariffs on products traded across North American borders, does not include the elimination of the 25% tariff on steel and 10% tariff on aluminium. Although it was signed in November 2018, the USMCA is yet to be approved by the US Congress and the Canadian and Mexican legislatures so that it takes effect.

The first region to take countermeasures against the US was the European Union (EU), which introduced 'rebalancing' tariffs on a range of US imports worth \$3.24-billion in June 2018. These measures will be in place for as long as the

US's new tariffs remain in force. The rebalancing was part of the EU's three-pronged response to the US's decision, with the other components of the response being the launch, also in June 2018, of legal proceedings at the WTO and the implementation of safeguard action to protect the EU steel market from disruptions caused by the diversion of steel from the US market.

Levied on 26 steel product types, the safeguard duties were provisionally introduced for a maximum of 200 days in July 2018, based on a quota system that allowed for a 25% duty on the targeted steel products once the level of traditional trade flows has been reached. The bloc's governing body, the European Commission, decided to impose the measures definitively from February 2019, citing an investigation it launched in March 2018, which found that steel imports into the EU had increased significantly over the past few years, that the flows were likely to increase further and that the situation had been aggravated by the trade diversion resulting from the US restrictions.

In response to Trump's decision to terminate Canada's and Mexico's exemption from the Section 232 tariffs on steel and aluminium imports, Mexico introduced tariff duties of 25% on a range of US steel products in June 2018. The country, the largest market for US pork exports, also imposed 20% tariffs on pork imports from its northern neighbour, as well as tariffs of 20% to 25% on other products, including apples, potatoes, cheese and bourbon.

Canada followed suit in July 2018, imposing tariff rates of 10% on more than 250 goods it imports from the US, such as beer kegs, whiskey and orange juice, as well as 25% on assorted US metal product imports. The new tariffs are estimated to total



C\$16.60-billion, equivalent to the 2017 value of Canadian metal exports affected by the US measures.

Canada, Mexico and the US have said they will continue negotiations regarding the metals tariffs and Trump has signalled that the US will be open to their removal, but only if Canada and Mexico agree to a quota system. However, the negotiations have not yet come to fruition. In December 2018, Canadian Foreign Affairs Minister Chrystia Freeland stated that the US's steel and aluminium tariffs contradicted a key component of the USMCA focused on automotive content and would, therefore, have to be removed before the trilateral deal could be ratified by the three countries' legislatures.

In an opinion piece published in January 2019, S&P Global Platts assistant editor Justine Coyne noted that, while Canada's chances of securing alternative arrangements for its steel and aluminium exports to the US appeared somewhat favourable, the prospects were dimmer for Mexico, with Trump having said during the previous month that he would close the border with Mexico if he did not receive funding for a wall separating the two countries. While Coyne admitted that it was unlikely the border would be closed, she contended that there was a possibility that the US President's insistence on a wall along the US-Mexico border could complicate negotiations aimed at reaching agreement on the steel tariffs.

Outside North America, India's steel Ministry announced in December 2018 that the Asian country was engaged in negotiations with the US administration regarding exemptions to the steel tariffs, which could result in the two countries agreeing on an alternative arrangement for Indian steel exports to the US.

Meanwhile, the US administration is scheduled to undertake negotiations with several trading partners during 2019, notably with the EU and Japan. The latter has repeatedly called for the removal of the steel tariffs, but it is unclear if the trade negotiations will result in its being exempted from the Section 232 tariffs.

The US steel industry has been open to the introduction of bilateral quota agreements instead of the import restrictions to ensure that the overall benefits of Section 232 tariffs are preserved.

Responding to a journalist's question in October 2018, steel producer Steel Dynamics Inc CEO Mark Millett contended that quotas were a better way of controlling the volumes of steel imports into the US than tariffs amid global overcapacity,

### Canada tribunal recommends tariffs for two types of steel

The Canadian International Trade Tribunal (CITT) recommended in April 2019 that safeguards be retained on stainless steel wire and heavy plate originating in many countries other than the US and that safeguards on five other steel products be lifted.

The Canadian government had argued that the safeguards were needed to protect local steel mills from an increase in imports from foreign producers who could no longer export to the US, following the imposition of steep tariffs by President Donald Trump's administration.

The CITT noted that, while there had been a significant increase in imports of products like concrete-reinforcing bar and energy tubular products, the volumes were not big enough to cause serious harm to the local industry.



Source: Reuters

which he forecast to continue for some time. The US already has quota agreements on steel imports with Argentina, Brazil and South Korea.

However, an opinion piece published in US business news magazine Forbes in January 2019 argued that quotas would be more restrictive than tariffs. The writer cites South Korea, which has had a quota arrangement with the US since May 2018, limiting its yearly steel shipments to the North American country to 70% of the average figure for the period from 2015 to 2017.

As the quotas are administered on a quarterly basis, US manufacturers' ability to source from South Korean steelmakers is constrained by what other US manufacturers would have already bought during that quarter. Complicating the situation is that information about steel purchases is not shared among US manufacturers, leading to uncertainty. By the time a container arrives in the US from South Korea, the quota may have been filled by another US manufacturer.





## STEELMAKING RAW MATERIALS

### Iron-ore

Amid the continued capacity ramp-up at several mining operations worldwide, many commentators forecast towards the end of 2018 that seaborne iron-ore supply would increase in 2019, from the previous year's figure of about 3.30-billion tonnes. However, following a tragic tailings dam collapse in January 2019 at number one iron-ore miner Vale's Corrego do Feijão mine, in Brazil's Minas Gerais state, there is much uncertainty about seaborne iron-ore supply for the next few years.

While the Corrego do Feijão mine is relatively small, producing only about 7.80-million tonnes of iron-ore a year, the implications of the dam collapse – which led to the release of 62-million cubic metres of toxic sludge that left an estimated 300 people dead or missing and caused extensive damage to property and the environment – have been significant. In the aftermath of the incident, Vale announced that it would decommission all its dams built using the upstream method – the same method used at Corrego do Feijão – resulting in the loss of 40-million tonnes a year of production over the next three years.

The production loss caused by the closure of the Vale mines could be as high as 70-million tonnes a year, according to Dutch multinational banking and financial services group ING, which noted in an analysis published in February 2019 that the loss would be partly offset by the continued ramp-up of Vale's flagship S11D Eliezer Batista Complex, in Pará state, resulting in a net loss of 40-million tonnes. S11D, which came on stream in 2017, produced 55-million tonnes in 2018, with a further increase to between 70-million tonnes and 80-million tonnes expected in 2019, before reaching its nominal capacity of 90-million tonnes a year in 2020. Vale announced in December 2018 that it intended to invest \$770-million in the mine to increase its capacity to 100-million tonnes a year from 2022.

Vale will not be the only casualty of the Brazilian government's new regulations banning tailings dams built using the upstream method. In a report published in February 2019, research and consulting firm Wood Mackenzie stated that it had reviewed 226 iron-ore tailings dams in the South American country, coming to the conclusion that 35 could potentially be affected by the decree, as they were classified as 'upstream' or 'construction method unknown'. The dams belong to the iron-ore mining units of Usiminas, Gerdau and Mineração Morro do Ipe, and junior miners that sell run-of-mine ore to Vale and CSN Mining, Brazil's second-largest iron-ore



Picture by Bloomberg

exporter. According to Wood Mackenzie's calculations, an additional eight-million tonnes a year of seaborne supply from these miners could be affected, in addition to the net loss from Vale, which the firm estimates at 50-million tonnes, and ten-million tonnes more than ING's estimate.

Other iron-ore miners will likely be keen to fill the supply gap that will be created by the closure of some of Vale's mines in Brazil and those of other companies operating in that country. However, Vivek Dhar, a senior mining analyst at Australia's Commonwealth Bank, told an interviewer in February 2019 that the world's other major iron-ore producers – Rio Tinto, BHP and Fortescue Metals Group, all of which have mines in Australia's prolific Pilbara region – would be hard-pressed to increase production, as all are near their total capacity.

Further, BHP CEO Andrew Mackenzie said in February 2019 that the issues that led to the suspension of some of Vale's production would be resolved over time, with most of the lost tonnes expected to return to the market at some time, diminishing any incentive by Vale's rivals to invest in new production capacity.

Thus, the strongest supply response to the curtailment at Brazilian iron-ore operations will come from high-cost producers in China, the Commonwealth of Independent States and, to some extent, Australian juniors.

The resumption of production in December 2018 at Anglo American's Minas-Rio mine, in the south-east of Brazil, will also bring additional supply to the market. Operations had been halted in March 2018, following the detection of leaks in the 529 km slurry pipeline that conveys iron-ore to the Atlantic Port of Açú. The suspension of operations was intended to facilitate the replacement of a 4 km stretch where





the leaks had been detected and several individual sections where minor anomalies below the threshold for intervention had been detected.

Anglo announced in December 2018 that it had been granted regulatory approval pertaining to the Step 3 licence area at the Minas-Rio mine. Access to this area will provide greater operational flexibility and allow for the mining of higher-grade iron-ore to support an increase in production towards the operation's design capacity of 26.50-million tonnes a year. Anglo previously stated that it expected to produce 16-million tonnes to 19-million tonnes of iron-ore (on a wet basis) during 2019. However, owing to the granting of the Step 3 licence, the figure has been increased to between 18-million tonnes and 20-million tonnes at a unit cost of \$28/t to \$31/t, compared with a previous guidance of \$30/t to \$33/t.

Meanwhile, India produced an estimated 210-million tonnes of iron-ore in the financial year to March 31, 2019 – the highest since 2009/10 – as independent producers increased output before their leases expire in 2020, according to the Federation of Indian Mining Industries.

The country adopted competitive auctioning in 2015 as the best long-term approach to clamp down on corruption after scandals over the free allotment of mines. The Indian Bureau of Mines has identified nearly 300 iron-ore, bauxite, limestone and manganese mines whose permits expire in March 2020 and government has asked states to start auctions for these mines by July 2019.

Owing to the curtailment of Brazilian supply, the iron-ore price surged from an average of \$70/t in 2018 to \$85.72/t at the end of March 2019. National Australia Bank (NAB) – which believes that the net production loss in Brazil will be about 43-million tonnes a year, as opposed to the 70-million-tonne estimate of some commentators – announced in February 2019 that it had raised its average iron-ore price forecast for 2019 from \$62/t to \$80/t, with a moderation to \$70/t in 2020, up from a previous 2019 forecast of \$60/t.

Wood Mackenzie believes that the removal of about 50-million tonnes from the market will sustain the iron-ore price at \$85/t, while a loss of 75-million tonnes will result in an increase to \$100/t.

## Metallurgical coal

Also known as coking coal, metallurgical coal – or met coal – is used to produce coke, the primary source of carbon used in steelmaking. The three main categories of coking coal are

hard coking coal (HCC), semisoft coking coal (SSCC) and pulverised coal injection coal, which, while it is not often classified as coking coal, is used as a source of energy in the steelmaking process. HCCs like anthracite have better coking properties than SSCC, enabling them to command higher prices.

More than 90% of the seaborne met coal trade comprises shipments from Australia, Canada and the US.

As the met coal market is highly dependent on the steelmaking industry, world trade increased by an estimated 4.40% to 324-million tonnes in 2018, driven by strong industrial production growth and, consequently, strong growth in steel output across the world, according to the Australian DIIS's Resources and Energy Quarterly for the three months to the end of December 2018.

However, in light of an expected slowdown in economic growth worldwide – particularly in China, the world's largest consumer – growth in the met coal trade is forecast to decelerate in the next two years, with total production reaching 340-million tonnes in 2020.

China, which depends on local supplies for 90% of its met coal requirements, is expected to post a decline in imports over the same period, owing primarily to a forecast moderation in steel production as economic growth decelerates. Also contributing to the decreasing Chinese imports will be the increasing use of electric arc furnaces and scrap metal in steel production.

Meanwhile, the DIIS states that India, which produced 45-million tonnes of met coal in 2018 – about 5.50% more than in 2017 – is set to overtake China as the largest importer from 2020 as its steel production increases. India, which is forecast to import 71-million tonnes in 2020, has limited domestic reserves and will need to import increased quantities to support its steel mills.

While the traditional importers in the Asian market – China, Japan and South Korea – will continue to dominate the seaborne met coal trade, the DIIS notes that imports into these countries will remain largely subdued in the short term. It forecasts only a modest increase in imports into Japan to 2020, with imports into South Korea remaining largely unchanged, owing to weak demand from the country's steel-using sectors.

The forecast for these established Asian markets contrasts with that for emerging markets, which the DIIS expects to post considerable growth, albeit off a low base. It notes





Picture by Creamer Media

The met coal market is highly dependent on the steelmaking industry

that many emerging-market countries are expanding their steelmaking capacity to meet demand from the construction and infrastructure sectors. The DIIS singles out Vietnam, Indonesia and Malaysia as having substantially expanded their blast furnace capacity, a development that will support demand for met coal.

Meanwhile, the DIIS expects Australia to retain its position as the largest met coal exporter over the next two years, with its shipments increasing from an estimated 178-million tonnes in 2018 to 190-million tonnes in 2019 and 193-million tonnes in 2020. The increase will be driven by a recovery from supply disruptions and a modest increase in production.

However, shipments from the second-largest exporter, the US, are projected to decline – from 54-million tonnes in 2018 to 49-million tonnes in 2019 and 45-million tonnes in 2020 – on the back of falling prices.

Further, the DIIS believes that exports from other countries will increase, driven by strong demand from the Asian market, where traditional importers are seeking to diversify their supply sources. It notes that producers in Canada are ramping up capacity, supporting an expected 2.40-million-tonne increase in exports to 31-million tonnes from 2017 to 2020, while shipments from Russia are expected to increase by 2.10-million tonnes to 25-million tonnes during the same

period as additional production capacity is installed. Beyond 2020, Russian exports could be further boosted, should the substantial reserves in the Yakutia region, in the east of the country, be developed.

While Mozambique was once regarded as the next major exporter of met coal, two major operations in the south-east African country – Vale's Moatize mine and Jinda Steel's Songa mine – have faced several challenges in recent times, including infrastructure constraints, quality issues and opposition from near-mine communities.

However, the DIIS forecasts that Mozambican met coal exports will increase from seven-million tonnes in 2017 to 13-million tonnes in 2020 as these two mines ramp up production.

Meanwhile, owing to export and import constraints, NAB stated in February 2019 that it expected HCC prices to average \$185/t in 2019, up from a previous forecast of \$170/t. However, the bank expects a moderation to \$158/t in 2020. Constraints on the export side include a regulatory dispute in the Australian state of Queensland that is impacting on the rail infrastructure operator in the state, thus limiting shipments. On the import side, shipments into China have been constrained by unofficial quotas aimed at boosting domestic output.





Picture by Creamer Media

# SOUTH AFRICAN STEEL MARKET

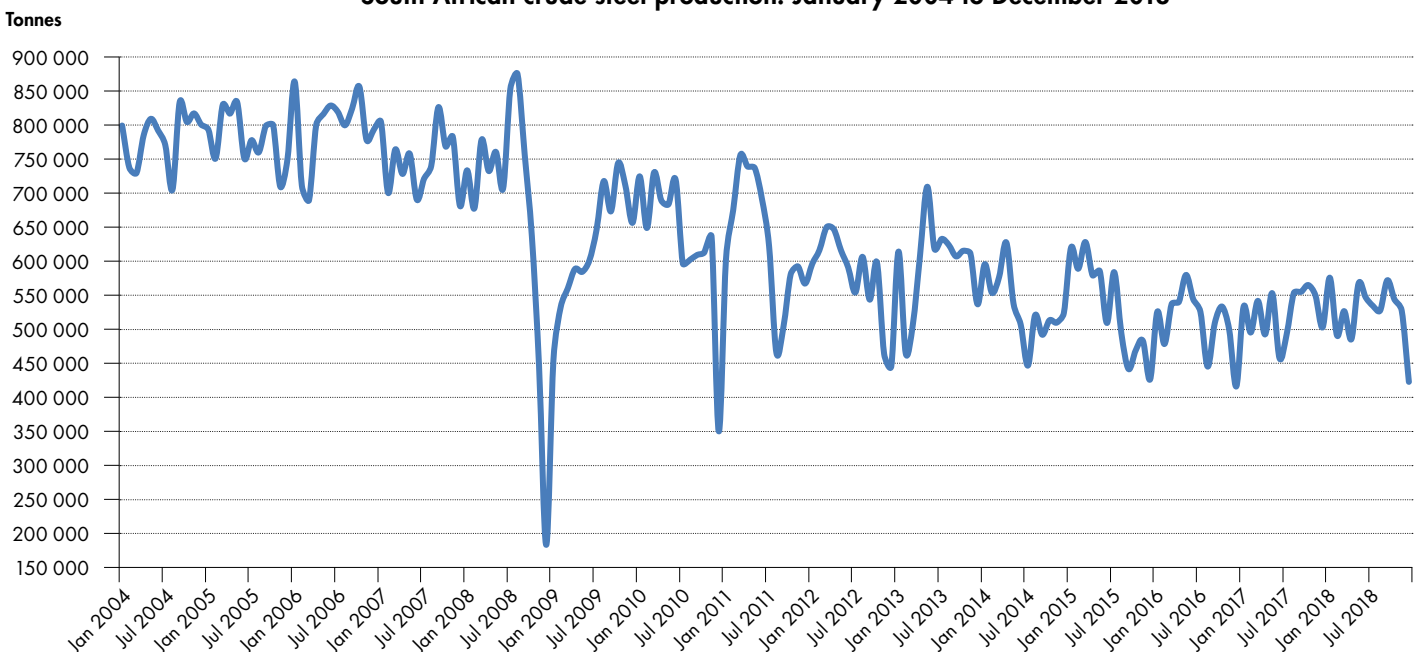
Steel is fundamental to manufacturing in South Africa, where the top steel-consuming industries – construction and automotive, as well as cable and structural steel manufacture – contribute R600-billion to the country's gross domestic product and employ eight-million people directly and indirectly, according to the Department of Trade and Industry (DTI). The primary steel industry is also a top user of electricity and rail logistics services.

Over the past 15 years, the country's primary steel industry has comprised ArcelorMittal South Africa (AMSA), Evraz Highveld

Steel and Vanadium, Cape Gate, Columbus Stainless and Scaw Metals Group, with mini mills Agni Steel, Fortune Steel, SA Steel Mills, Cape Town Iron and Steel Works (Cisco) and Veer Steel Mills starting operations in recent years.

The steelmaking industry has been in decline since 2004, when output totalled 9.40-million tonnes, compared with the 6.30-million tonnes produced in 2018. Highveld Steel and Vanadium's closure in 2015 accounted for a production loss of about one-million tonnes a year.

**South African crude steel production: January 2004 to December 2018**



Source: South African Iron and Steel Institute







Picture by Creamer Media

The steelmaking industry has been in decline since 2004

Besides weak demand, the main cause of the decline has been a surge in cheap imports, which impact on the profitability and capacity use rates of domestic producers. Aged plants and the high cost of electricity have also been major operational challenges, with AMSA, the country's largest steelmaker, warning in February 2019 that rising electricity costs posed a risk to its nascent financial recovery and long-term competitiveness. It intends petitioning the National Energy Regulator of South Africa for tariff relief from State-owned electricity utility Eskom for its operations in Gauteng, KwaZulu-Natal and the Western Cape.

The challenges facing the domestic steelmaking industry have been aggravated over the years by global excess capacity, which is estimated at 500-million tonnes.

Adding to the woes of steelmakers, including those in South Africa, the US administration imposed protective import tariffs on steel and aluminium products in March 2018, limiting access to that market.

Steel producers are also concerned about the imposition of the long-delayed Carbon Tax, which was approved by South Africa's National Assembly in February 2019 for implementation

from June 1, 2019, and the planned introduction of an export tax on scrap metal.

Owing to the challenges that the steel industry faces, the country's second-largest steelmaker, Evraz Highveld Steel and Vanadium, has gone into business rescue. AMSA, meanwhile, which was lossmaking for many years, posted its first full-year profit since 2010 in 2018 on the back of a 12% increase in average realised prices and a 5% increase in sales volumes, supported by a 21% increase in export sales.

To alleviate the plight of domestic steelmakers, the South African government has, besides other measures, developed a short-term negotiated electricity pricing framework – which applies to other energy-intensive users – and established a fund to support key downstream steel sectors and subsectors. In 2017, the National Treasury approved R95-million for the fund, with R30-million earmarked for each of the 2017/18 and 2018/19 financial years and R35-million for 2019/20. In addition, using its own funding, State-owned development financier the Industrial Development Corporation leveraged this allocation to establish an aggregate Steel Development Fund (SDF) of about R1.50-billion. The SDF aims to assist qualifying companies in improving their competitiveness and to bail out companies that



are in distress, but have a turnaround plan. The beneficiaries are foundries, fabricators, parts and components manufacturers, valve and pump manufacturers, and machining plants, as well as capital equipment manufacturers.

The other measures the South African government has taken to support the domestic steel industry have included the designation of more than 20 products for local procurement by government departments and State-owned companies (SOCs), including railway rolling stock, power pylons and buses, as well as value-added products such as fabricated structural steel, frames and structural pipework. In addition, a local-content threshold of 100% has been specified for primary steel products such as plate, sheets, galvanised and colour-coated coil, wire rod and drawn wire, sections and reinforcing bar.

While some of the designations have been in place for more than five years, Steel and Engineering Industries Federation of Southern Africa (Seifsa) CEO Kaizer Nyatumba told *Engineering News* in December 2018 that they were not being fully adhered to by several government departments and SOCs. To remedy the situation, Trade and Industry Minister Rob Davies has announced that the DTI intends approaching the Auditor General to request that any lack of adherence to the designations be regarded as a reportable irregular expenditure during audits of departments and SOCs. A task team has also been established to assess how to improve local-content enforcement across government, but *Engineering News* reported in December 2018 that the outcomes of its deliberations had not yet been published.

Further, the South African government is assisting steel companies in exploring other markets for their products, with a focus on sub-Saharan Africa, and is engaging with US buyers to apply for product exemptions where the US does not have sufficient capacity. The South African government has also implemented trade measures over the past few years to protect local steel producers.

## PRODUCTION AND CONSUMPTION

The World Steel Association (worldsteel) estimates that South Africa produced 6.30-million tonnes of crude steel in 2018. While this was almost the same volume as in 2017, the country's ranking in 2018 improved from twenty-sixth to twenty-fifth out of the 64 countries that report to worldsteel, which account for about 99% of total crude steel production.

Owing to an improvement in capacity use to 84% in 2018, AMSA's liquid steel production for the year also increased to 5.10-million tonnes.

Local steel demand, however, remained weak in 2018, with AMSA calculating that apparent steel consumption in the country declined by 4% during the year.

In light of weak domestic steel demand, exacerbated by economic growth rates over the past three years below the 1.80% to 2% required to ensure the profitability of most steel companies, AMSA announced in October 2018 that it would explore growth opportunities in sub-Saharan Africa to enhance its short-term profitability and cash flow position. In particular, it is aiming to supply downstream companies in the Southern African Development Community region, as well as those in East and West Africa.

## STEELMAKING RAW MATERIALS

South African steel producers source the key ingredient in the steelmaking process – iron-ore – from local suppliers. The main iron-ore supplier is Anglo American subsidiary Kumba Iron Ore, which produced 43.10-million tonnes in 2018, a 4% year-on-year decline. Of the 43.30-million tonnes Kumba sold that year, 3.30-million tonnes was delivered to AMSA, to which it is contracted to supply 6.25-million tonnes a year. Kumba expects its 2019 production and sales volumes to range from 43-million tonnes to 44-million tonnes, with deliveries to AMSA envisaged to total three-million tonnes.

Kumba subsidiary Sishen Iron Ore Company (SIOC) completed the transfer of its defunct Thabazimbi mine, in Limpopo, to AMSA in October 2018. Until 2014, Thabazimbi was a captive mine owned and run by SIOC but was funded by and supplied ore exclusively to AMSA.

The transfer of the mine, for a nominal cost of R1, and the assumption by AMSA of its liabilities, will simplify the arrangement between the two companies, with AMSA to be solely responsible for the closure and rehabilitation of the mine, which ceased operations in September 2016. AMSA is assessing the prospects of restarting the mine in the long term using part of the existing openpit and moving into fresh sources of ore.

South Africa's second-largest iron-ore producer, Assmang, a joint venture between black-controlled African Rainbow Minerals and Assore, also supplies significant quantities of iron-ore to the domestic steelmaking industry. During the financial year ended June 30, 2018, the company's Beeshoek mine, in the Northern Cape, supplied 3.60-million tonnes to the domestic market and is targeting local sales of three-million tonnes in 2019.

The mine supplied 404 000 t to export customers in 2017/18 and aims to ship 350 000 t in 2018/19. Assmang's much bigger





Khumani mine, also in the Northern Cape, is export focused and supplied 13.90-million tonnes to the global seaborne iron-ore market in 2017/18. It is targeting export sales of 14-million tonnes in 2018/19.

Another iron-ore supplier to the South African steelmaking industry, the Mapochs mine, in Limpopo, went into business rescue together with its parent, Evraz Highveld Steel and Vanadium, in 2016, but was acquired by Chinese group International Resources Limited (IRL) in September 2017.

IRL has not stated when it intends resuming operations at the mine, which previously produced 2.20-million tonnes of ore a year for Evraz Highveld, to produce steel and vanadium.

Meanwhile, a new junior miner, Mangwe Mining, commissioned its Assen iron-ore mine, in the North West, in April 2017. Boasting a measured resource of about 20-million tonnes, the mine will initially produce 60 000 t of saleable ore a month. The black-owned and -managed company intends to expand its business by consolidating the nearby fragmented Limpopo iron-ore deposits. It will supply all its production to AMSA, delivering four-million tonnes to five-million tonnes a year over the next five years. There has not been any recent update on the operation.

While South Africa produces significant quantities of thermal coal, used primarily for heat, steam and electricity generation, there is limited domestic supply of metallurgical coal – or met coal – another important steelmaking ingredient. As a result, the country imports an estimated R4-billion worth of met coal each year, according to Minerals Council South Africa's 'Coal Strategy 2018' document. Additional supplies of coke are produced by AMSA's Coke and Chemicals Works business unit at its batteries in Vanderbijlpark, Newcastle and Pretoria for the AMSA group's own furnaces in Vanderbijlpark and Newcastle, as well as for sale to the ferroalloy industry.

## STEEL PRICES

The imposition by the US of import duties on steel products in March 2018 resulted in double-digit steel price increases in the US. As a result, US steel costs are now the highest in the world, putting US manufacturers like Ford, General Motors and Caterpillar at a significant competitive disadvantage compared with their global rivals. Additionally, the decision by Chinese authorities to enforce curtailments at steelmaking facilities to clean up the environment led to a decline in supplies and, thus, pushed prices upwards. However, by year-end, global steel prices had lost 18% on the back of weakening demand, according to a report published by Dutch banking group ABN AMRO in February 2019.

Owing to the high global steel prices for much of 2018, AMSA achieved a 12% increase in average net realised steel prices from R8 338/t in 2017 to R9 301/t in 2018. The higher prices were partially responsible for AMSA's posting a profit for the year, the first in nearly a decade.

ABN AMRO stated in its report that, since the beginning of 2019, steel prices had declined further, adding that it expected further weakness as the year progressed, owing to contracting demand. This – coupled with increases in iron-ore prices in the aftermath of the Brazil tailings dam disaster, which some mills would not be able to pass on to end-users – would likely affect the profitability of steelmakers.

## IMPORT PROTECTION

In response to local steel manufacturers' concerns about increasing volumes of cheap imports amid declining domestic demand, the International Trade Administration Commission of South Africa (Itac) has imposed protective tariffs and safeguard measures on a range of upstream and downstream steel products since September 2015.

Support for the primary steel industry has included the imposition of 10% import duties on galvanised/coated and painted steel, as well as a range of other products, including wire rod, reinforcing bar, semifinished steel, steel plates, cold- and hot-rolled steel, steel sections, structural steel and other bars, rods and forges. In August 2017, Itac implemented a 12% safeguard duty on hot-rolled steel, with the level decreasing to 10% in August 2018 and set to decrease further to 8% in August 2019, before being scrapped 12 months later.

In return for the tariff protection granted for its hot-rolled steel, which is used by domestic rerollers Duferco Steel Processing and Safal Steel, AMSA reached three-year pricing agreements with Duferco and Safal in April 2017 and October 2017 respectively. The pricing will be implemented over three years to ensure that AMSA does not abuse its position as the sole producer. This has resulted in steel imports being replaced, as AMSA now supplies Duferco and Safal.

In another reciprocal measure, AMSA committed to investing R4.60-billion in its operations over five years. Addressing the National Assembly's Portfolio Committee on Trade and Industry in September 2018, Itac chief commissioner Meluleki Nzimande stated that the steelmaker had invested R1.78-billion of this amount – or 38.80% of the target figure – by the end of 2017, comprising R1.30-billion to improve cost competitiveness, R180-million to increase capacity and improve the quality of its products, and R272-million to sustain operations. Envisaged



additional investments include a new electric arc furnace, which is currently at the feasibility study stage and will make AMSA more competitive. AMSA also committed to refraining from retrenching workers.

Further, in October 2017, Itac initiated a process to create rebate provisions for ordinary customs duties on primary steel products that are not manufactured locally to reduce import costs to the downstream industry.

The tariff support that is already in place for the downstream industry includes increased tariffs on several finished products. In reciprocation, the downstream industry has committed to preserving jobs and refraining from implementing retrenchments for three years following the granting of tariff support. It has also committed to creating 400 new jobs during the same period. A total of 186 jobs had been created by the end of 2017, Nzimande told Parliamentarians, adding that these jobs comprised 13 at Maccaferri and Gabion Baskets, which manufacture gabions of wire netting, and 173 at Kwikspace Modular Buildings, a manufacturer of prefabricated buildings.

According to Nzimande, owing to the import protection measures, flat steel product imports declined from 316 255 t between April 2016 and March 2017 to 155 146 t between April 2017 and March 2018. Long steel product imports also decreased during the same period – from 39 263 t to 27 844 t. However, imports of some coated flat steel products continued to increase and Nzimande said Itac suspected that duty circumvention could be taking place. He revealed during his presentation that Itac intended to initiate an investigation into tariff support for tubes and pipes.

Itac's import protection measures have not been universally supported, however, with the National Employers Association of South Africa being one of the most strident critics. Writing in the South African Builder magazine in February 2018, association CEO Gerhard Papenfus contended that the protection that had been granted to AMSA, a monopoly primary steel producer, had a detrimental impact on the downstream steel industry in that it had to pay 22% more on imported steel when import tariffs and safeguard duties are taken into account. This, he claimed, was despite the fact that AMSA's steel products were of a poor quality and that the company had a lamentable record in terms of on-time delivery.

Papenfus queried why AMSA continued to enjoy import protection despite not having fully met its commitment to invest in upgrading its operations. Modern steel mills, he argued, would give the downstream industry access to cost-effective, high-quality steel that was produced locally. This, he added, would give impetus to the current process of reversing deindustrialisation in the

country, as would the repeal of the duties that are in place, which would ensure that local manufacturers would be able to source high-quality, cost-effective steel from wherever it was available.

## US STEEL TARIFFS

Like many governments worldwide, the South African government expressed its deep concern when US President Donald Trump introduced import tariffs of 25% and 10% on steel imports and aluminium imports respectively in March 2018.

In a presentation to the National Assembly's Portfolio Committee on Trade and Industry, in June 2018, officials from the DTI stated that the steel tariffs would particularly affect Durferco, Hall Longmore, Columbus Stainless, AMSA and Cisco.

Durferco exports 57% of its output to the US and directly employs 400 people at its Saldanha plant, in the Western Cape, while Hall Longmore exports pipe and tube to customers in the US oil and gas industry, Columbus Stainless manufactures niche products used in the US coal, railcar and bus industries, and AMSA exports seamless tube for the oil and gas industry, as well as thin hot-rolled coil.

Initial efforts to secure exemptions for these projects were turned down in May 2018. However, following further submissions, the US administration announced in October 2018 that it had granted tariff exemptions on 161 aluminium products and 36 steel products, including hot-rolled bar, hot-rolled sheets, cold-rolled sheets, plates cut and plates in coils. Some US senators had also been lobbying for the US to exempt South African steel and aluminium products from the tariffs, as they were concerned that South Africa could impose reciprocal imports on US chicken exports.

The South African government has encouraged steel producers to continue engaging with the US buyers of their products to consider requesting the US administration for tariff exemptions for all South African steel and aluminium products. In 2017, South Africa exported 330 000 t of steel products to the US, representing less than 1% of the latter's total steel imports, while aluminium product exports were equivalent to about 1.60% of the US's aluminium imports.

## SCRAP METAL

Since 2013, the export of scrap metal has been undertaken in line with the South African government's price preference system (PPS), which was imposed for five years and in terms of which scrap must first be offered for sale to domestic consumers



at a discount of 20% to 30% to an internationally benchmarked price. This aims to promote local industrialisation and the local beneficiation of South African scrap. According to the South African government, the PPS also supports the National Infrastructure Plan and assists in lowering carbon emissions from the steelmaking process.

In an address to the National Assembly in June 2018, Economic Development Minister Ebrahim Patel said that, owing to the PPS, scrap metal export volumes had declined by 60% from 2014 to 2016, while the value had decreased from R5.80-billion to R1.90-billion during the same period. This had resulted in a marked improvement in scrap metal supply to the local industry.

When he presented the 2019/20 Budget in February 2019, Finance Minister Tito Mboweni announced that the National Treasury, the DTI and the Economic Development Department were exploring the introduction of an export tax on scrap that would replace the PPS. Mboweni did not disclose the proposed rate of the tax, but some commentators have welcomed the announcement, stating that, in addition to the revenue collected directly from the levying of the export tax, incidental job creation may result in an increase in tax revenue in the form of employees' pay-as-you-earn tax.

Meanwhile, Cisco, acquired in 2012 by Turkish group DHT Holdings, was officially opened in May 2018, following a R550-million investment to expand and upgrade its operations. The factory, which produces steel products from scrap that are typically used in the manufacturing and construction industries – locally and abroad – aims to produce 500 000 t/y when it reaches its nameplate capacity.

The Cisco plant was originally established in 1967 and was closed down in 2010 by its previous owner, Murray & Roberts, and put on care and maintenance. Its reopening followed the introduction of the PPS.

## CARBON TAX

South Africa's Parliament approved the long-delayed Carbon Tax Bill in February 2019, paving the way for the legislation to take effect on June 2, 2019. The new law allows for a tax rate of R120/t of carbon dioxide equivalent above the tax-free thresholds and will assist South Africa in meeting its commitment under the 2015 Paris Agreement to cut its emissions by almost half by 2030, when they are expected to peak at between 398-million tonnes and 614-million tonnes of carbon dioxide equivalent. However, the total tax-free allowances during the first phase of implementation – to 2022 – can be as high as 95%.

In an article published in Business Day newspaper in October 2018, Seifsa chief economist Michael Ade argued that the timing of the tax's imposition was inopportune for the South African steel industry, which is experiencing low domestic demand, a lack of new markets, an increase in cheap imports from China and a 25% tariff on some exports to the US. He stated that these challenges, coupled with some external factors, had generally decreased steel exports, reduced existing market share and forced many local steel companies to cease production.

Ade said the Carbon Tax would impact on the export competitiveness of South African steel producers, while adding to production costs, with dire implications for employment.

The Carbon Tax has also been criticised by the Industry Task Team on Climate Change, which includes many of South Africa's largest mining and industrial companies. The task team has stated that the tax will have no material impact on reducing carbon emissions from the electricity sector, which is responsible for about half the country's greenhouse-gas emissions.

The task team contends that, given the structure of the South African electricity sector, the Integrated Resource Plan for electricity, coupled with mandatory carbon budgets, would be more effective in facilitating structural change in the economy's largest emitting sector.

The tax has also been opposed by trade union Solidarity, which contended in June 2018 that the steel and metals industry could not absorb it, adding that the industry could not access funding to renew industrial facilities to reduce their carbon intensity, owing to weak economic fundamentals and the vulnerability of the industry to price pressures.

## WAGE NEGOTIATIONS

Intense negotiations following the expiry of the 2014 Metal and Engineering Industries Bargaining Council (MEIBC) main wage agreement in June 2017 – comprising more than 20 formal, informal and bilateral meetings – culminated in the signing of a new three-year settlement agreement in August 2017.

The settlement agreement was concluded by 21 employer associations that are members of Seifsa and the trade unions registered with the MEIBC. It provided for an increase of 7% from July 2017, followed by an increase of 6.75% for the second year and 6.50% for the third and final year. This was the first time in about ten years that a wage settlement had been reached without strike action.





Picture by Creamer Media

# SOUTH AFRICAN STEEL PRODUCERS

## ARCELORMITTAL SOUTH AFRICA

ArcelorMittal South Africa (AMSA), a subsidiary of world number one steel producer ArcelorMittal, is Africa's largest manufacturer of the alloy, with capacity to produce up to seven-million tonnes of liquid steel and about 4.80-million tonnes of saleable products each year. Most of its products are supplied to the domestic market, with the balance exported to the rest of sub-Saharan Africa and other markets. In 2018, local sales – at 3.34-million tonnes – accounted for about three-quarters of the total sales figure of 4.49-million tonnes.

The company's product mix comprises flat steel products, long steel products and coke for its own consumption and for sale to the ferroalloy industry and other customers.

The flat steel products, which include slabs and heavy plates, as well as hot- and cold-rolled coil and coated products, are manufactured at the 2.90-million-tonne-capacity works at its Vanderbijlpark head office, in Gauteng, and at its mainly export-focused 1.30-million-tonne-capacity Saldanha Works, on the West Coast. These products are supplied mostly to the construction, piping, packaging and automotive industries. Owing to the challenges in the South African steel industry, including muted demand, the flat steel products division's capacity use declined from 86% in 2014 to 75% in 2015, before climbing to 76% in 2016 and 82% in 2017 as the South African government implemented trade measures to protect domestic steel producers against cheap imports, primarily from China. Debottlenecking

initiatives during 2018 resulted in the division's capacity use increasing further to 85%.

The long steel products – which include bars; billets; blooms; hot-finished and cold-drawn seamless tubes; window and fencing profiles; light, medium and heavy sections; rod; and finished products – are manufactured at the Newcastle Works, in KwaZulu-Natal, and the Vereeniging Works, in Gauteng, primarily for the construction industry. The two plants have a combined installed capacity of 1.90-million tonnes of liquid steel a year. The division's capacity use rate of 81% in 2018 represented a 5% year-on-year improvement, which was attributable to debottlenecking initiatives.

The Coke and Chemicals unit has batteries in Vanderbijlpark, Newcastle and Pretoria with a combined installed capacity of 650 000 t of metallurgical coke. About two-thirds of the unit's revenue is derived from sales to the ferrochrome industry, while significant quantities are also delivered to the aluminium, alloys and petrochemicals sectors, besides others. The unit also processes and beneficiates metallurgical and steel by-products for sale as raw materials for a variety of users.

## Operational and financial performance

Following years of sustained losses, AMSA posted a full-year profit in 2018 on the back of a 12% increase in average realised prices and a 5% increase in sales volumes, supported by a 21%





### AMSA seeks growth opportunities in sub-Saharan Africa

In light of South Africa's muted economic growth over the past few years, which has resulted in steel demand in the country being consistently weak, steelmaker ArcelorMittal South Africa (AMSA) has implemented a strategy to enhance its short-term profitability and cashflow by positioning itself to exploit growth in sub-Saharan Africa.

AMSA CEO Kobus Verster said during a media tour to the company's Vanderbijlpark facilities, in October 2018, that steel consumption in South Africa was at a ten-year low.

He added that the company was considering opportunities to supply downstream industries in Southern African Development Community member countries and in East and West Africa.

Source: Engineering News

increase in exports. The company had last reported a full-year profit in 2010.

Earnings from operations recovered from a loss of R1.22-billion in 2017 to a profit of R2.78-billion, while

headline earnings improved from a loss of R2.52-billion to a profit of R968-million. AMSA's revenue increased by 16% to R45.27-billion in 2018 (2017: R39.02-billion), as a result of an increase in average net realised steel prices from R8 338/t in 2017 to R9 301/t.

The turnaround was achieved despite weak demand for steel in South Africa, where overall demand declined by 4% and apparent steel consumption decreased to a nine-year low.

AMSA's 2018 results were also lifted by a R415-million profit on the sale of the group's 50% shareholding in Netherlands-based Macsteel International Holdings (MIHBV) to a subsidiary of Macsteel Luxembourg – which was finalised in November 2018 – as well as there having been no repeat of the R2.60-billion impairment charge taken on property, plant and equipment in 2017.

The flat steel products division's liquid steel output increased from 3.46-million tonnes in 2017 to 3.56-million tonnes in 2018 on improved capacity use, while production at the long steel products division also increased year-on-year – from 1.45-million tonnes to 1.53-million tonnes.



Picture by Creamer Media

AMSA's Vanderbijlpark operations





AMSA reopened the electric arc furnace at its Vereeniging mill in January 2019, in a development that is set to increase long steel production volumes. The furnace was closed in 2015, at the height of AMSA's financial and operational difficulties, and its reopening, which created 100 direct jobs, was informed partly by an improvement in conditions in the long steel products market and partly by a desire to reduce operational complexities at Newcastle, where structural complexities are undermining its competitiveness. The restart will enable the Newcastle plant to focus on fewer grades and address ongoing scheduling problems. However, production from the new furnace is restricted to off-peak periods, owing to the high cost of electricity and the electricity-intensive nature of the process.

The group's total cost for each tonne of flat steel produced, however, increased from R7 770 in 2017 to R7 928, while the total cost of producing each tonne of long steel increased from R7 126 to R7 171, as the cost of auxiliaries and consumables and fixed costs increased by 6% and 3% respectively, offsetting a 1% decline in the cost of iron-ore, coal and scrap, which accounted for a combined 48% of total costs.

Meanwhile, AMSA has stated that it will not reopen its electric arc furnace facilities at Vanderbijlpark, which were closed for cost, logistics and environment reasons, but has instead initiated a feasibility study into a new electric arc furnace that will be fully integrated with the downstream steel shops at the complex and complement existing blast furnace production.

Vanderbijlpark has a nameplate capacity of 3.20-million tonnes, and the new furnace could increase this capacity beyond four-million tonnes, depending on the scale that will be determined by the ongoing feasibility study. No investment estimate has been provided for the new furnace, which is expected to start production in three to four years. It will give AMSA the flexibility to use iron-ore and coke or scrap metal as feedstock. The group calculates that there is excess scrap metal in South Africa and forecasts that the scrap balance will improve in the future.

Besides the availability of scrap metal, the electricity price path will also play a significant role in the project's economic viability.

Concerned about the impact of electricity price increases on its nascent recovery and long-term competitiveness, AMSA announced in February 2019 that it intended to petition the National Energy Regulator of South Africa (Nersa) for tariff relief from State-owned utility Eskom for its operations. Nersa has granted Eskom permission to increase tariffs for direct customers by 13.82% from April 1, 2019, with increases for municipal customers to follow on July 1, with adjustments to cater for the

### Numsa strikes at AMSA

The National Union of Metalworkers of South Africa (Numsa) announced in early March 2019 that it would stage a strike at AMSA over the ongoing use of a labour broker.

A month later, the union cancelled a planned march on AMSA's offices in Johannesburg, Gauteng, citing a threat by the company to interdict the march.

Numsa, which identified the labour broker as Real Tree Trading and Monyetla Services, accused AMSA of seeking to circumvent a judgment delivered by the Constitutional Court in 2018 that stipulated that workers employed through labour brokers be permanently employed after working full time for the main employer for three months. The union alleged that its members who were hired through labour brokers worked under unsafe conditions.

AMSA refuted the allegations, stating that Real Tree Trading had been recognised as a service provider by the Metals and Engineering Industries Bargaining Council, as well as in previous engagements with Numsa.

As part of its business optimisation programme, the company has proposed, over the next three years, to in-source some workers with critical skills who are employed by its service providers.

Source: *Engineering News*

three-month lag during which municipalities will be unable to pass on the higher tariffs to customers.

AMSA's site-specific applications will be in line with the framework for negotiated pricing agreements (NPAs), which Silicon Smelters has successfully used to secure a two-year NPA, facilitating the restart of ferrosilicon production at its facilities in Limpopo and Mpumalanga. The group says its application will be linked to increases in capacity, which will, in turn, be aligned with its goal of increasing production by stabilising volumes at levels higher than the 84% capacity use achieved in 2018.

AMSA CEO Kobus Verster told *Engineering News* in February 2019 that, even before the new prices come into effect on April 1, 2019, electricity costs placed the group at a 30% competitive disadvantage relative to its global competitors. He added that, besides seeking NPAs, AMSA was studying ways of reducing electricity consumption, where feasible.

Meanwhile, although AMSA previously stated that it would consider selling its position in Consolidated Wire Industries (CWI), Verster said the group's strategy to incorporate more downstream value-adding activities had been reaffirmed in recent months and that it would instead focus on improving the performance of CWI.



### New CFO for steel group

Avinash Desmond Maharaj assumed the position of CFO at steelmaking company ArcelorMittal South Africa in September 2018, taking over from Gerhard van Zyl, who had been acting in that position since March 2018, when Dean Subramanian resigned.

Maharaj, who will also serve as an executive director, holds a master's degree in finance and is a qualified chartered accountant. He has 22 years' experience, including 17 at senior executive level in finance and general management.

Source: *Engineering News*

### Environmental compliance

AMSA allocated R105-million of its R1.37-billion capital expenditure budget for 2018 to projects aimed at improving environmental compliance. This represented a 256% increase on the R41-million allocated for 2017, when the group struggled to comply with some of the conditions of its environmental licences, as its financial performance prevented it from investing in the necessary improvements.

The company did not provide details of the projects being implemented to lessen its environmental impact when it presented its 2018 financial results, but reported in its 2017 integrated annual report, published in March 2018, that it intended to upgrade its Saldanha works' reverse-osmosis capability, enabling the plant to reduce its water intake by about 40%.

It also stated that its Vanderbijlpark sinter plant continued to face difficulties with its emissions abatement system, resulting in particulate emissions being the group's greatest area of underperformance. According to the company's latest Annual Value Creation Report, there was a significant improvement in the environmental performance of the sinter plant, with its particulate emissions of 0.30 kg for every tonne of liquid steel produced equating to one-quarter of the 2017 figure.

Across the company, specific particulate emissions declined by 22% year-on-year in 2018. Carbon dioxide emissions – at 2.91 for every tonne of liquid steel produced – were 3.3% lower, owing to increased electricity self-generation, the implementation of energy efficiency measures and higher steel production. Sulphur dioxide emissions, however, were 24% higher in absolute terms.

This was attributable to higher readings from the Newcastle sinter plant and a higher sulphur content in the coal supplied to the steelmaker, as well as improved monitoring.

Meanwhile, AMSA executives said in February 2019 that they had been notified of plans to prosecute the company over alleged transgressions of its emissions licence at Vanderbijlpark. If the matter proceeded to court and AMSA was convicted, a fine of up to R15-million would be imposed, in accordance with the relevant legislation.

### EVRAZ HIGHVELD STEEL AND VANADIUM

Once South Africa's second-largest steel producer, Evraz Highveld Steel and Vanadium, of which Russian group Evraz was an 85% shareholder, was forced by a prolonged downturn in the domestic steel industry, besides other factors, to go into business rescue in 2015.

However, the structural mill at the complex was relaunched in June 2017, after AMSA had signed a contract with the business rescue practitioners (BRPs) to supply blooms and slabs for the mill to process into heavy structural steel. The contract was initially for two years, with an option for renewal or to acquire the mill.



Picture by Creamer Media

Evraz Highveld Steel and Vanadium's operations



In a filing to the Companies and Intellectual Property Commission (CIPC), submitted in February 2019, the BRPs stated that contract manufacturing continued to be undertaken at the structural mill and that the first option date for the purchase of the mill had not been exercised. They added that the second option date – March 2019 – would mark the end of the initial contract manufacturing agreement period.

The other business strategies for Evraz Highveld Steel and Vanadium entailed converting the complex into the Highveld Industrial Park – with units leased for use as workshops, storage facilities and offices, besides others – and selling the two iron plants and plate mill at the site.

The BRPs stated in their CIPC filing that they were reviewing several proposals for the plate mill and Iron Plant 2, which included the restart of operations at both facilities. They added that the scrapping of redundant portions of Iron Plant 1 had started, with the process expected to take six months.

## SCAW METALS GROUP

With its main operations in Johannesburg, Gauteng, as well as a presence in Australia, Italy, Ghana, Namibia, Zambia and Zimbabwe, Scaw Metals Group has been in operation since 1924, producing grinding media and wire rod, as well as cast and rolled products used in a range of industries, including mining, rail, power, offshore oil and gas, and construction, besides others.

Until early 2018, Scaw was 74%-owned by the State-owned Industrial Development Corporation, with black economic-empowerment entity Main Street 510 – comprising Izingwe Holdings, Shanduka Resources and Southern Palace Group – owning 21% and employees 5% through an employee share ownership plan.

However, in February 2018, the Competition Tribunal approved the acquisition of Scaw's wire rod and rolled-products from the IDC by black-owned and -managed investment holding company Barnes Southern Palace. As the IDC retained a minority shareholding in Scaw, the approval was granted on the proviso that the IDC ensure that its representatives on the Scaw board were not the same persons it appointed to the board of its CWI subsidiary to prevent the sharing of sensitive information.

In March 2018, South Africa's Competition Commission approved the proposed acquisition of Scaw's cast products division by US-based Amsted Rail Company on condition that no employees be retrenched for 18 months from the date of the acquisition. Meanwhile, in May 2018, Chilean company Magotteau

announced that it was engaged in negotiations to become a strategic equity partner for Scaw's grinding media division.

## CAPE GATE

Established in 1962 as a small, family-owned wire-netting manufacturing company in Vanderbijlpark, Cape Gate has grown into a sizeable producer of wire and steel products used in the South African and export mining, agriculture, industrial, commercial and civil engineering and construction sectors.

Cape Gate's steel product mix includes hot-rolled round bar in coils, hot-rolled round bar in lengths, wire rod and round sections, while the wire products it manufactures include black wire, galvanised wire and fencing and stranded products.

The Competition Tribunal reported in June 2018 that it had reached a R40-million settlement agreement with Cape Gate, following the steelmaker's admission of its involvement in price fixing, dividing markets and collusive tendering concerning light galvanised wire, nails, wire and various other products.

## CAPE TOWN IRON AND STEEL WORKS

Located at Kuilsrivier, in the Western Cape, Cape Town Iron and Steel Works (Cisco) is a scrap-based steelmaking company that produces reinforcing steel in billet and bar form.

The Cisco melt shop, where the steel is melted, currently uses about 280 000 t/y of scrap steel but there are plans to increase the nameplate capacity to 500 000 t/y.

Founded in 1967, Cisco ceased production in 2010, before being acquired by Turkish-owned DHT Africa in 2012 and resuming operations in May 2018.



Picture by Creamer Media







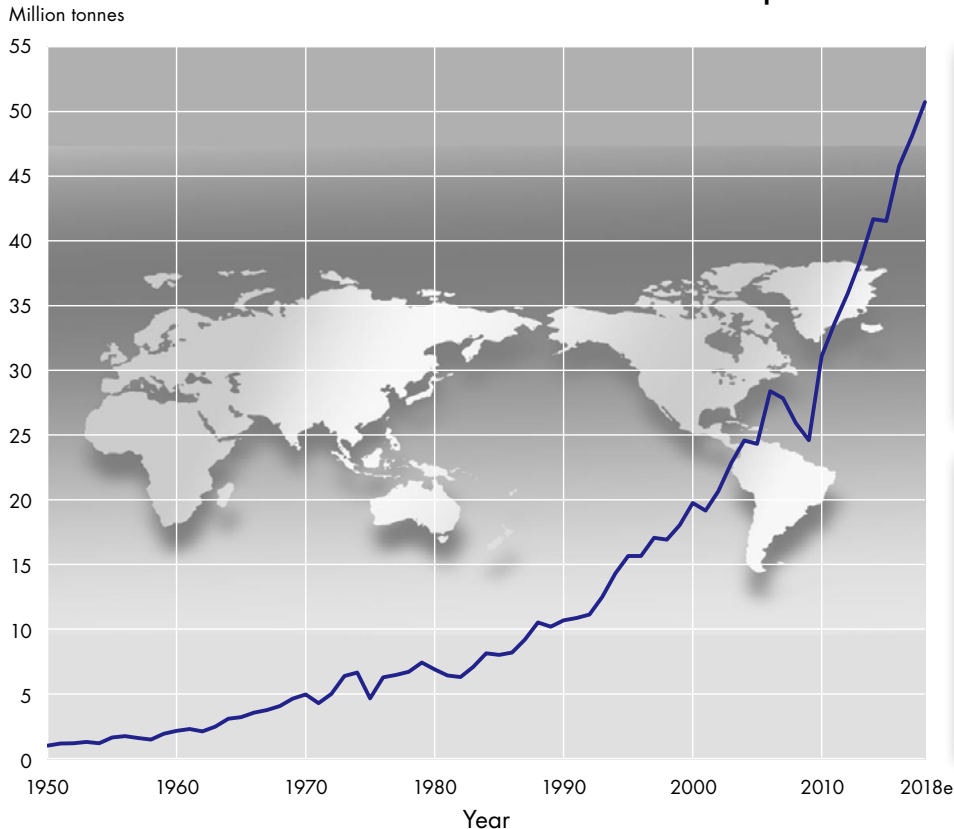
Picture by Creamer Media Chief Photographer Dylan Slater

# GLOBAL STAINLESS STEEL MARKET

Invented early in the twentieth century, stainless steel is an iron alloy that contains at least 10.50% chromium, as well as varying quantities of manganese, carbon, silicone and other elements, such as nickel and molybdenum, to give it enhanced formability and corrosion resistance.

The alloy is used in thousands of applications, with the largest end-use segments – machinery and equipment, fabricated metals, automotive and architecture, building and construction – accounting for about 77% of demand. Machinery and equipment and fabricated metals account for 58% of aggregate market

## Stainless steel world production



Source: International Stainless Steel Forum and Acerinox  
e – estimate

World production of  
stainless steel in 2018e:  
**50.70-million tonnes**  
(+5.5% over 2017)

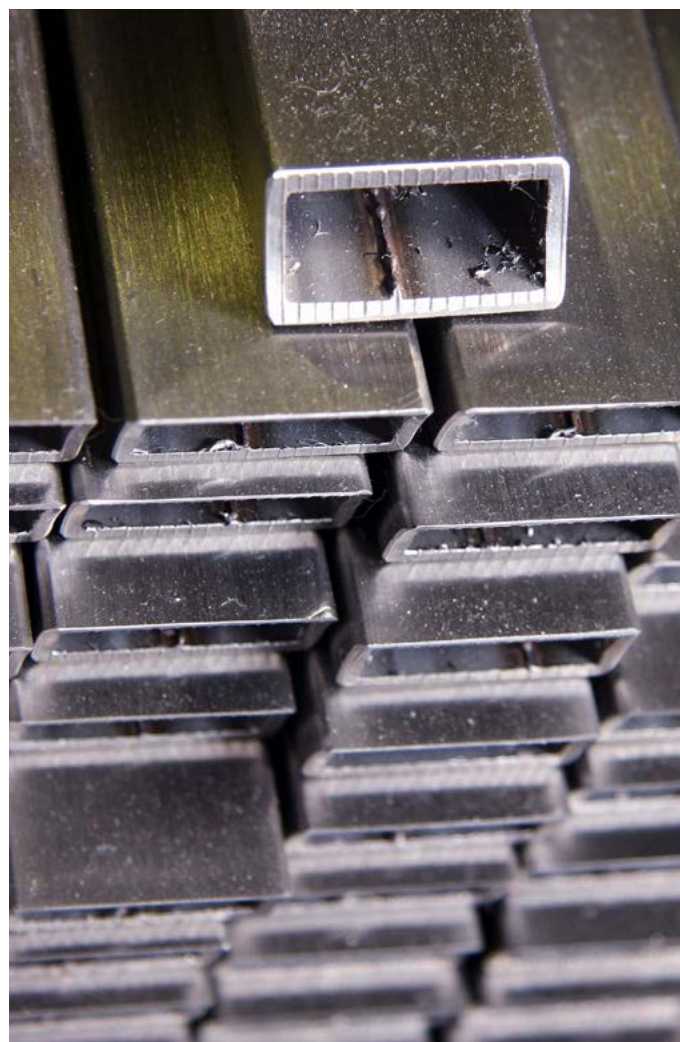
Compound annual  
growth rate 1950 to 2018e

**+5.9%**



volume in industrialised countries and 69% in emerging and developing countries, according to an article published in the Journal of the Southern African Institute of Mining and Metallurgy in June 2018. The automotive sector accounts for 12.40% of demand in industrialised countries, while the segment's share in developing and emerging countries is about 5.30%. Worldwide, the architecture, building and construction sector accounts for 13% of demand. There are regional variations, however, with the Japanese architecture, building and construction sector traditionally preferring stainless steel roofing and bathtubs, while these are seldom found in European countries.

Stainless steel has been one of the fastest-growing metal products over the past few decades, owing to rapid demand growth from the construction, transport and consumer products sectors, besides others.



Global stainless steel production increased to 50.73-million tonnes in 2018

According to an article published in the Journal of the Southern African Institute of Mining and Metallurgy, stainless steel demand from the 1950s to the 1970s was defined by the post-World War II reconstruction period.

The US stainless steel market led global development until the late 1960s, when producers in Japan and Europe overtook it, having steadily increased their market share. China, which had been sporadically smelting stainless steel prior to the 1980s, became a noteworthy supplier from about 2000 and has established itself as the market leader in recent years, accounting for about 54% of the world's crude stainless steel supply in 2017.

China's dominance has been supported by growing demand for the alloy on the Asian continent and China's ability to meet this demand using unconventional raw materials like nickel pig iron.

State-supported capital expenditure on modern stainless steelmaking equipment has also contributed to the Chinese stainless steel sector's growth.

## PRODUCTION

Global stainless steel production increased by 5.50% – from 48.08-million tonnes in 2017 to 50.73-million tonnes in 2018 – as all regions posted year-on-year increases. According to the International Stainless Steel Forum, European Union output increased by 0.10% to 7.39-million tonnes in 2018, while output in the US was 2% higher, at 2.81-million tonnes. Chinese output increased by 3.60% year-on-year to 26.71-million tonnes, accounting for almost 53% of global output.

Asia, excluding China and South Korea, posted a 2.10% year-on-year increase to 8.20-million tonnes, while the combined output of Brazil, South Africa, Russia, South Korea and Indonesia increased by 35.90% to 5.64-million tonnes.

Stainless steel melt shop production (in tonnes)			
Region	2018	2017	Year-on-year change
Europe	7.39-million	7.38-million	1.10%
US	2.81-million	2.75-million	2%
China	26.71-million	25.77-million	3.60%
Asia (excluding China and South Korea)	8.20-million	8.03-million	2.10%
Other	5.64-million	4.15-million	35.90%
<b>Total</b>	<b>50.73-million</b>	<b>48.08-million</b>	<b>5.50%</b>

Source: International Stainless Steel Forum







Picture by Bloomberg

# SOUTH AFRICAN STAINLESS STEEL INDUSTRY

The stainless steel industry is a sizeable contributor to the South African economy in terms of employment creation and gross domestic product (GDP) contribution. According to the Southern African Stainless Steel Development Association (Sassda), primary stainless steel production and the conversion of stainless steel products into finished products account for R19-billion and R11-billion respectively of South Africa's GDP each year. About 37 000 employees are directly involved in the conversion of primary products into finished products, with an additional 76 000 people employed in support industries and services. Sassda executive director John Tarboton told *Engineering News* in October 2018 that the support industries and services added R12-billion to GDP each year.

South Africa produced 465 236 t of stainless steel primary products, such as sheet and bar during 2018, about 9% down on the 2017 output of 511 527 t. Exports declined by 13% year-on-year to 352 871 t, while imports increased by 16.30% to 43 738 t.

After reaching a record 199 054 t in 2014, South African stainless steel primary product apparent consumption was on a downward trend until 2017, when the industry posted total consumption of 143 717 t. However, as conditions in the domestic market improved, apparent consumption in 2018 increased by 8.60% year-on-year to 156 103 t.

The rather subdued domestic apparent consumption of stainless steel products – which is substantially below the 2014

peak of 199 054 t – is attributable to higher-than-inflation electricity price increases and wage increases that are not matched by improvements in productivity. As the demand for stainless steel is linked to GDP, the muted growth of the South African economy in recent years has also been a contributory factor, while the difficulties facing domestic stainless steel producers have been exacerbated by cheap imports from China.

It is hoped that the use of stainless steel in cladding and construction, which is in the early development stages in South Africa, will provide an opportunity for the local industry to grow rapidly over the next decade. Although slightly more expensive than alternative materials, stainless steel is resistant to corrosion, heat and chemical damage, thereby providing a favourable life-cycle costing in many instances.

Meanwhile, South African stainless steel production will increase in the next few years, should State-owned Chinese companies proceed with their plans to build a \$10-billion metallurgical complex at the Musina-Makhado Special Economic Zone, in Limpopo. Agreements to build the complex were signed in July 2018, during Chinese President Xi Jinping's State visit to South Africa.

The project, construction of which is scheduled to start in 2019, will beneficiate local ores into alloys such as ferrochromium, ferromanganese, silicomanganese and ferrovandium, as well as stainless steel semifinished products.



While Sassda has welcomed the planned Chinese investment, it has pointed out that the semifinished stainless steel products from the plant should be integrated into the global stainless steel value chain, as there is no room for another producer to supply stainless steel products to the South African market.

Meanwhile, in view of the somewhat subdued demand in South Africa, the local stainless steel industry is exploring new markets in the rest of Africa, which boasts some of the world's highest GDP growth rates. Sassda – which represents about 400 member companies and promotes the conversion of stainless steel primary products into finished products – intends to arrange country visits to identify potential manufacturing partnerships where its members can share expertise and secure supply contracts.

### COLUMBUS STAINLESS

Majority-owned by Spain's Acerinox group, Columbus Stainless operates a one-million-tonne-a-year plant on a 431 ha site in Middelburg, Mpumalanga, producing austenitic stainless steel and ferritic stainless steel, as well as duplex stainless in plate, sheet, coil and strip. The products are cold- or hot-rolled.

Owing to low levels of domestic demand, Columbus Stainless, the only stainless steel mill in Africa, exports about three-quarters

of its output. However, Acerinox, which has a 66% stake in the company, with the balance held by the State-owned Industrial Development Corporation, stated in February 2019, when it released its results for the 12 months to December 31, 2018, that its South African subsidiary had benefited from a recovery in apparent consumption in the domestic market, helped by increasing demand from the key automotive and container tank industries.

Columbus Stainless's output in 2018 comprised 550 217 t from the melting shop, 531 200 t from the hot-rolling shop and 297 548 t from the cold-rolling shop, representing year-on-year declines of 3.10% and 4.90% and a 0.80% increase respectively.

Meanwhile, Columbus Stainless allocated more than €5-million during 2018 for the installation of a cutting line that will enable it to offer its customers cut-to-size materials and increase exports. The new cutting line will also enable the company to increase direct sales from the factory, improving service and shortening delivery times.

Also during 2018, Columbus Stainless placed an order for a 110-t-capacity ladle furnace. The new €12-million ladle furnace, which is scheduled for commissioning in November 2019, will improve the productivity of the melting shop, while reducing energy consumption and carbon dioxide emissions.



Picture by Creamer Media Chief Photographer Dylan Slater

Columbus Stainless's operations





## OUTLOOK

Despite steelmaking capacity reductions in some countries in recent years – notably in China, which eliminated 120-million tonnes from 2014 to 2017 – excess capacity persists.

ArcelorMittal, the world's largest steel producer, expects apparent steel consumption to increase by 0.50% to 1% in 2019, while the World Steel Association forecasts yearly growth of 1.10% from 2017 to 2035.

According to ArcelorMittal, the largest apparent steel consumption growth in 2019 – 3.50% to 4.50% – will be posted by Brazil, with consumption increasing by 1% to 2% in the Commonwealth of Independent States, 0.50% to 1.50% in the US and 0.50% to 1% in the European Union.

Chinese apparent steel consumption – which increased by 3.50% in 2018 – will contract by 0.50% to 1.50%, according to ArcelorMittal's forecast.

The projected average steel demand growth of 1.10% to 2035 will not be enough to absorb the current steel excess capacity of about 500-million tonnes a year.

Consequently, following its Ministerial meeting held in Paris, France, in September 2018, the 33-member-country Forum on Steel Excess Capacity resolved to adopt a process that will allow for the identification and removal of subsidies and other government support mechanisms that contribute to excess steelmaking capacity.

Organisation for Economic Cooperation and Development secretary-general Angel Gurría commented after the same

meeting that the issue of excess steelmaking had to be dealt with urgently.

The overcapacity – which is especially pronounced in China, Europe, the Middle East and North Africa – is impacting on the profitability of steel producers, some of which are adjusting to the situation by pursuing new products and business model extensions that enable them to move up the value chain.

According to consultancy McKinsey, some steelmakers are venturing into parts manufacturing, while others are concentrating on one or two premium end-use sectors, collaborating closely with customers on new steel grades and solutions.

As steel demand levels are not expected to return to boom-year levels in the short term, excess steel capacity is set to persist for a long time. Consequently, protectionist measures will likely continue to be implemented by some countries.

Commentators warn that this has the potential to cause a global trade war that could have a detrimental effect on global economic growth, further harming the steelmaking industry.

Meanwhile, ArcelorMittal South Africa, the country's largest steelmaker, stated in February 2019, when it released its results for the 12 months to December 31, 2018, that it expected domestic steel demand, which remained weak in 2018, to be stable in the first half of 2019. The company also expects steel exports, which increased by 21% in 2018, to be stable in the first half of 2019.



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## STEEL 2019

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