STEEL

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A REVIEW OF SOUTH AFRICA'S STEEL SECTOR

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LIST OF ABBREVIATIONS AND ACRONYMS

AMSA	ArcelorMittal South Africa
DTIC	Department of Trade, Industry and Competition
EU	European Union
FOB	free on board
GDP	gross domestic product
HCC	hard coking coal
HSM	Highveld Structural Mill
HRC	hot-rolled coil
IMF	International Monetary Fund
Itac	International Trade Administration Commission of South Africa
Neasa	National Employers' Association of South Africa
PPS	price preference system
PV	photovoltaic
Sassda	Southern African Stainless Steel Development Association
SRO	short-range outlook
Tips	Trade and Industry Policy Strategy
RBCT	Richards Bay Coal Terminal
UN	United Nations
worldsteel	World Steel Association

KEY DEVELOPMENTS

June 2019: JSE-listed ArcelorMittal South Africa receives a summons instituting criminal proceedings for three charges pertaining to transgressions of its atmospheric emissions licence at its Vanderbijlpark operations, in Gauteng.

June 2019: Steelmaker ArcelorMittal South Africa (AMSA) signs an agreement to procure at least 350 000 t/y of hard coking coal (HCC) from a domestic source. As South Africa has limited production of metallurgical coal, AMSA and other coke producers import HCC.

August 2019: The National Employers' Association of South Africa calls for the scrapping of steel import duties, which it says are negatively impacting on South Africa's downstream steel sector.

September 2019: Steel major ArcelorMittal South Africa announces a review of the operational and financial sustainability of certain of its major operating sites, individual plants and production areas, warning that the review may lead to the closure of some sites.

November 2019: Steel producer ArcelorMittal South Africa announces its intention to close Saldanha Works, in the Western Cape.

January 2020: The World Steel Association reports that global steel production increased by 3.40% to 1.87-billion tonnes in 2019.

January 2020: China enters a lockdown to slow the spread of Covid-19, bringing its economy to a standstill. Steel production, however, continues.

February 2020: The Competition Tribunal approves ArcelorMittal South Africa's acquisition of the structural steel and rail business of Highveld Structural Mill, a subsidiary of Evraz Highveld Steel and Vanadium.

March 2020: Several countries announce lockdown measures to slow the spread of Covid-19, stopping steel production facilities and severely damaging demand.

March 2020: Steel production capacity across South Africa is halted as government institutes a nationwide lockdown in response to the Covid-19 pandemic.

April 2020: The World Steel Association delays the publishing of its April short-range outlook, which provides guidance on steel demand, citing the continuing disruption caused by the coronavirus.

April 2020: China is the first major economy to emerge from the coronavirus crisis, with most of its manufacturing and construction activity resuming. China releases its first negative growth figure since the start of economic reforms in 1978, with a first-quarter contraction of 6.80%.

May 2020: Iron-ore surges past $100/t as supply woes in Brazil coincide with sustained, robust demand from top steel-producer China.

June 2020: ArcelorMittal South Africa agrees to pay a R3.64-million fine to the Department of Environmental Affairs, Forestry and Fisheries as a settlement for transgressions of the atmospheric emissions licence at its Vanderjilpark operations during 2016.

June 2020: South Africa eases its lockdown measures to assist the struggling economy. Steel companies are allowed to reopen at full capacity, but primary steel producer ArcelorMittal South Africa says it is waiting for demand to become visible before it will operate with 100% of its workforce.

June 2020: The World Steel Organisation releases its short-range outlook for 2020 and 2021, forecasting that steel demand will contract by 6.40%, dropping to 1.65-billion tonnes in 2020, before recovering to 1.72-billion tonnes in 2021.

July 2020: Trade, Industry and Competition Minister Ebrahim Patel issuesa trade policy directive to the International Trade Administration Commission of South Africa to urgently investigate measures to help support the metals industry.

July 2020: Steel producer ArcelorMittal South Africa submits two separate applications to the International Trade and Administration Commission of South Africa requesting import protection on hot-rolled coil and heavy structural beams.

August 2020: The National Treasury and the South African Revenue Service publish various draft taxation documents, including the proposed introduction of an export tax on scrap metals, for public comment.

August 2020: The National Employers' Association of South Africa files an urgent application in the Gauteng High Court to stop the International Trade Administration Commission of South Africa implementing a 10% import tariff, and custom duties on coated flat-rolled products.

GLOBAL STEEL MARKET

The steel market faced several headwinds in 2019, including weakened global economic activity, trade uncertainties, an acceleration of new capacity investments and the persistence of excess capacity.

The market witnessed a sudden and steep downward correction in international steel prices, while the costs of iron-ore, in particular, rose substantially. The overwhelming majority of steelmakers struggled to remain profitable.

The Covid-19 pandemic has accelerated the effects of low demand, overcapacity, weak balance sheets and liquidity challenges, impacting on the viability of an industry that was already in distress.

The steel industry has been up-ended by lockdowns, from Europe to South-East Asia, to prevent the spread of Covid-19. By April, about 90% of the global economy entered some form of lockdown, which severely hampered economic activity and set the world on course for its deepest recession since World War II and the broadest collapse in per capita income since 1870.

World Economic Outlook growth projections:
The Covid-19 pandemic will severely impact on growth across all regions

		PROJECTIONS	
	2019	2020	2021
World output	2.90	–3	5.80
Advanced economies	1.70	–6.10	4.50
US	2.30	–5.90	4.70
Europe	1.20	–7.50	4.70
Germany	0.60	–7	5.20
France	1.30	–7.20	4.50
Italy	0.30	–9.10	4.80
Spain	2	–8	4.30
Japan	0.70	–5.20	3
UK	1.40	–6.50	4
Canada	1.60	–6.20	4.20
Other advanced economies	1.70	–4.60	4.50
Emerging markets and developing economies	3.70	–1	6.60
Emerging and developing Asia	5.50	1	8.50
China	6.10	1.20	9.20
India	4.20	1.90	7.40
ASEAN-5	4.80	–0.60	7.80
Emerging and developing Russia	2.10	–5.20	4.20
Russia	1.30	–5.50	3.50
Latin America and the Caribbean	0.10	–5.20	3.40
Brazil	1.10	–5.30	2.90
Mexico	–0.10	–6.60	3
Middle East and Central Asia	1.20	–2.80	4
Saudi Arabia	0.30	–2.30	2.90
Sub-Saharan Africa	3.10	–1.60	4.10
Nigeria	2.20	–3.40	2.40
South Africa	0.20	–5.80	4
Low-income developing countries	5.10	0.40	5.60

Source: International Monetary Fund

In its 'World Economic Outlook' report, published in April, the International Monetary Fund (IMF) projects the global economy will contract by 3% in 2020. The forecast is based on the assumption that the pandemic and required containment measures will peak in the second quarter for most of the countries, and will recede in the second half of the year.

Should the pandemic fade in the second half of the year, the IMF forecasts global growth to rebound to 5.80% in 2021, but the recovery will remain below the level that was projected for 2021, before the virus outbreak.

The IMF is forecasting that advanced economies will contract by 6.10%, while emerging market and developing economies, with normal growth levels well above those of advanced economies, will also have negative growth of –1% in 2020 and –2.20% in 2021, excluding China.

The IMF forecast is in line with the decrease projected by the United Nations (UN) in its 'World Economic Situation and Prospects', published in May. Against the backdrop of the devastating pandemic, the UN projects the global economy will contract by 3.20% this year. The world economy is expected to lose about $8.50-trillion in output over the next two years, wiping out nearly all gains of the previous four years.

The inevitable global recession is reducing steel demand in the global market, as buyers are being impacted on by shutdowns, disrupted supply chains and collapsing confidence, as well as delayed investment and construction projects. Steelmakers, mostly outside of China, responded quickly to the sudden plunge in demand with capacity cuts.

China – the world's most important steel market – was in lockdown for about two months, bringing its economy to a standstill. Since emerging from the coronavirus crisis, it has been working towards full normalisation of its economic activity.

The country's economy contracted by 6.80% in the first quarter of 2020. This is the first negative growth figure since the start of the economic reforms initiated by Deng Xiaoping in 1978.

China's growth rate bears particular significance for commodity markets, as its economy accounts for about half of global commodity consumption and production.

China's economy is expected to recover faster than the rest of the world, which should mitigate the impact on global steel demand.

Most countries have been gradually reopening from their lockdowns since mid-May, which should facilitate a recovery of economic activity in the third quarter.

DEMAND

Worldwide steel use, according to the Australian government's Office of the Chief Economist, increased by 5%, from 1.81-billion tonnes in 2018 to 1.90-billion tonnes in 2019.

The steel market is a tale of contrasts between the strong and the weak. Whereas Chinese consumption continued to expand, 2019 turned out be a rare steel recession outside China.

Chinese demand is more tilted towards infrastructure and construction than most other countries and continued to receive strong government backing, keeping demand relatively strong.

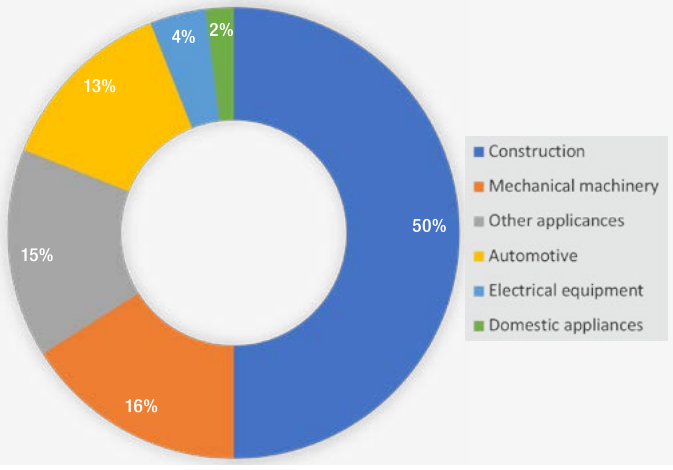
According to China Iron and Steel Association information, Chinese consumption rose by 6% to 875.30-million tonnes in 2019. The Australian government's estimates for 2019 Chinese steel consumption is 4% growth to 898-million tonnes.

Energy and commodity market commentator S&P Global Platts reports that domestic steel demand in 2019 had been strong enough to absorb most of China's incremental steel production.

Diversified miner BHP, which is an important supplier of iron-ore to China, says it was surprised by the overall strength of end-use demand in China and by the elevated production run rates that have served the demand. Real estate, which accounts for about two-fifths of steel demand, was firmer than expected, led by high single-digit growth in housing developments.

Infrastructure accounts for a further 15% of demand. The elements of this broad category that are most important for steel were solid, but not spectacular. Parts of the manufacturing segment of end-use (cumulatively about 45% of demand) were weak – for example, passenger cars and machine tools. Others were firm – for example, excavators, ships, trucks and agricultural machinery.

Steel use by sector



Source: Australian government

Steel demand tapered off towards the end of 2019, as trade tensions continued to simmer and demand from the automotive industry slowed. Carmakers are major users of steel, but automotive sales slowed down in the second half of 2019, on consumer sentiment weakness and vehicle emission policy uncertainty.

Steel demand eased in the early part of 2020, partially because of factors, including softening automotive production and continued trade tension, but the outbreak of Covid-19 exacerbated that downward pressure.

The economic fallout from the pandemic is of concern to the steel industry, as consumers postponed discretionary spending, with muted demand in all sectors, barring essentials. Mechanical machinery and automotive are the steel-using sectors most affected by the lockdown measures. They are highly exposed to a prolonged demand shock, as well as to disruption in global supply chains.

The automotive industry, according to the World Steel Association (worldsteel), is the pandemic's biggest victim among the steel-using sectors. The industry is expected to suffer a loss of 20% in sales in 2020, in addition to the losses over the past two years.

The European Car Manufacturers' Association estimates that shutdowns have resulted in the lost production of more than two-million units across the European Union (EU). Car sales dropped by more than 50% across the EU during March. Commodity market analysts CRU expects EU automotive production to contract by 21.60%, China's automotive production by 10.50% and North American vehicle production by 19.60% in 2020.

In China – the world's biggest steel consuming nation – steel-using sectors have also been impacted on by the virus. The construction sector suffered the most, as almost all projects had been suspended since the last week of January. The situation improved from early March, however, as travel restrictions were gradually lifted, worldsteel Beijing office chief representative Frank Zhong reports.

Nevertheless, a significant contraction in all steel-using sectors is evident in government's first-quarter statistics. This includes a 6.80% contraction in gross domestic product, a 7.70% contraction in real estate investment, a 19.70% contraction in infrastructure investment, a 17.20% contraction in mechanical engineering, a 44.60% contraction in motor vehicle production, a 28.50% contraction in ship deliveries and a 27.90% contraction in air conditioner production.

By the end of April, all major steel-using sectors in China were back to near full productivity, even though the full operation of the manufacturing sector is hindered by the collapse in export

Source: Southern African Stainless Steel Development Association

demand. Following the lifting of the lockdown in Wuhan on April 8, the construction sector has reached 100% productivity.

With individual and institutional spending bound to remain lacklustre, governments have to boost infrastructure investments to drive an economic recovery. Such infrastructure projects could provide a market for steel.

The recovery path from the current crisis will depend on the duration of the lockdowns and the timing of exit plans. The manufacturing sector, however, is expected to rebound quicker than other sectors.

The Australian government, in a June 2020 quarterly report, is forecasting a 6% decrease in global steel usage in 2020, Consumption should rebound by 5% in 2021 and by 4% in 2022, as the global economy recovers.

The June 2020 short-range outlook (SRO) of worldsteel is forecasting demand to contract by 6.40%, dropping to 1.65-billion tonnes in 2020, before recovering by 3.80% to 1.72-billion tonnes in 2021.

Although China's steel demand will increase by 1% in 2020, the SRO forecasts steel demand in the developed economies to decline by 17.10% in 2020.

The worldsteel forecast assumes that most countries' lockdown measures will continue to ease, with physical distancing controls remaining in place, and that the major steelmaking economies will not suffer from substantial secondary waves of the pandemic.

PRODUCTION

Global crude steel production, as reported by worldsteel, increased by 3.40% to 1.87-billion tonnes in 2019, with production contracting in all regions, except in Asia and the Middle East.

Production became even more unbalanced from a geographic perspective during 2020, with China expanding output by about 8.25% and the rest of the world contracting by about 1.50%.

China remains the undisputed global champion of steel production, producing about 53% of the world's output. The country boosted output by 8.30% to 996.30-million tonnes in 2019. The industry is State-supported, but faces downside risks, owing to broader global uncertainty and tighter environmental regulations.

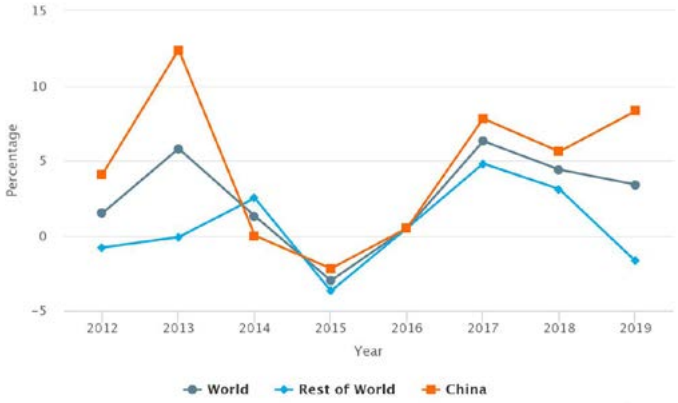
Growth in emerging Asia is dominated by India and Vietnam, which have unveiled plans to develop much larger industries. India has become a pivotal participant in global steel production over the past five years and is the second-biggest steel producer. The country lifted its production by 1.80% to 111.20-million tonnes in 2019.

Japan is the third-biggest producer, with production of 99.30-million tonnes in 2019, which is a 4.80% decrease from the 104.30-million tonnes produced in 2018.

The European Union (EU) produced 159.40-million tonnes of crude steel in 2019, a decrease of 4.90%, compared with 2018. Germany and Italy, the bloc's two biggest producers, registered substantial production decreases.

In the first three months of 2020, world crude steel production was 443-million tonnes, down by 1.40% from the same period in 2019.

Crude steel production yearly growth trend



Source: World Steel Association

Asia's steel production dipped by 0.30% to 315.15-million tonnes. Despite Covid-19-related construction, infrastructure and factory curtailments in China, crude steel production increased by 1.20% year-on-year in the quarter from January to March, as steel producers continued to operate their blast furnaces during this time.

The business-as-usual steel output in China, together with reduced demand, has led to a sharp uptake in stockbuilding. Citing China Iron and Steel Association, worldsteel says the total steel stocks held by steel producers and distributers accounted for more than 55-million tonnes at the end of March, which is the highest on record and was 160% higher than the level recorded at the end of December 2019.

Many steelmakers had to resort to using external storage space. As a response to this, from late February, steelmakers began to reduce production levels. About 73 blast furnaces with a capacity combined of 77-million tons a year halted production from late February and, by mid-April, steel inventories were reduced.

Shutting down, or idling, blast furnaces are the often the last resort in the steel industry. Blast furnaces are large reactors used for smelting

Top ten steel-producing countries

Rank	Country	2019 (Mt)	2018 (Mt)	Percentage difference 2019/2018
1	China	996.30	920	8.30
2	India	111.20	109.30	1.800
3	Japan	99.30	104.30	–4.80
4	United States	87.90	86.60	1.50
5	Russia (e)	71.60	72	–0.70
6	South Korea	71.40	72.50	–1.40
7	Germany (e)	39.70	42.40	–6.50
8	Turkey	33.70	37.30	–9.60
9	Brazil	32.20	35.40	–9
10	Iran (e)	31.90	24.50	30.10

(e) – yearly figure estimated using partial data or non-worldsteel resources
Source: World Steel Association

iron-ore into liquid steel at temperatures ranging from 900 °C to 1 300 °C. Once a blast furnace is shut down, it is expensive and time-consuming to restart.

India's steel production in the first quarter contracted by 5.30% year-on-year to 27.51-million tonnes, with a contraction of 13.90% in March. India entered a nationwide lockdown on March 25, and by mid-April, about a quarter of blast furnace capacity had been idled. The lockdown continued throughout May, although the Indian steel industry partially restarted operations during this time.

The EU's steel production dropped by 10% to 38.29-million tonnes in the first quarter. The 28-country bloc's biggest producer, Germany, reported only a 0.30% production decrease to 9.47-million tonnes, but Italy and Spain reported double-digit production losses in the quarter. Italy's production decreased by 16.20% to 5.28-million tonnes and that of Spain by 11.20% to 3.26-million tonnes. In March, Italy's production plummeted 40%.

The European steelmakers' association reported in April that as much as 50% of the EU's steel production had been cut as a result of the coronavirus crisis and it expected further losses, as demand plunged by as much as 75%. The world's biggest steel company, Luxembourg-headquartered ArcelorMittal, has curtailed production capacity in Italy, France, Spain, Germany, Belgium and Poland.

Production in North America, where the US is the biggest producer, decreased by 4% to 29.52-million tonnes in the first quarter. As the pandemic escalated in the latter part of the quarter, ArcelorMittal responded to the impact on its key end-markets by announcing the temporary blow-down of blast furnaces in Canada and in the US. Another vertically integrated steel producer, Cleveland-Cliffs, has also idled a Detroit-based steel mill, owing to weakened demand.

The Australian Department of Industry, Science, Energy and Resources says in its June 2020 'Resources and Energy Quarterly' that declines in steel demand and supply in the US are expected to persist for some time.

Brazil and Argentina also reported production curtailments towards the end of March. Brazil's first-quarter production fell 7% to 8.02-million tonnes, while Argentina's output fell 14% to 928 000 t. Overall, worldsteel reports that South America's production decreased by 7.10% to 9.96-million tonnes in the first quarter.

The production curtailments that started towards the end of March are reflected in worldsteel's March, April and May statistics.

India – which in 2019 was the second-biggest steel-producing nation – reported year-on-year production decreases of 13.90% in March, 65.20% in April and 39.10% in May. Japan's production was also sharply lower, with output falling by 9.70% year-on-year in March, 23.50% in April and 31.80% in May.

Research and analytics provider S&P Global Market Intelligence is forecasting that Japanese steel output will drop to 91-million tonnes in 2020 – its lowest level since 88-million tonnes in 2009 – and expects India's steel production growth to pause for the first time since 1999, with a drop of 6% forecast for 2020.

Production in the EU, compared with a year earlier, contracted by 22.90% in April and by 26.80% in May. In the US, steel output decreased by 32.50% in April and by 36.60% in May.

The Australian government is forecasting steel production to decrease by 4% in 2020, before rising by 4.50% in 2021 and 4% in 2022.

Meanwhile, iron-ore major BHP forecasts that China's steel production will peak by the middle of this decade. "Our base case is that Chinese steel production has entered a plateau phase, with the literal peak to occur no later than the middle of this decade. Our low case for China, which underpins our global view on steelmaking raw materials, assumes that the peak year is contemporaneous," BHP said in February.

Green revolution seen turning around Australia's steel industry

Australia can benefit from its abundance of cheap wind and solar power generation to arrest decades of decline in its steelmaking industry.

Harnessing the nation's iron-ore resources and using hydrogen produced by renewable power, Australia could capture about 6.50% of the global steel market, generate about A$65-billion a year in export revenue and create tens of thousands of manufacturing jobs, says the Grattan Institute policy think tank.

The so-called green steel would also reduce the need for using polluting metallurgical coal.

"Climate change is a wicked conundrum for Australia," the report says. "It's a threat to our health and to our agriculture and tourism industries – but tens of thousands of Australians work in industries that rely on fossil fuels. This practical plan could be a win-win-win."

The technology is still in its infancy and efforts to make it a commercial reality are furthest advanced in Europe, where policymakers are quickly tightening the screws on industry to scale back pollution.

Australia's steel industry has long been in decline. It now ranks as only the twenty-sixth biggest producer, with output of about 5.70-million tons a year, according to the World Steel Association.

Source: Bloomberg News

STEELMAKING RAW MATERIALS

Quick fact

1 000 kg of steel requires 1 400 kg of iron and 800 kg of coal to make

The main steelmaking materials are iron-ore, metallurgical coal and ferrous scrap. Australia is the main supplier of iron-ore and metallurgical coal, with exports of both accounting for about 60% of global seaborne supply in 2019, placing the country at the heart of the global steel value chain.

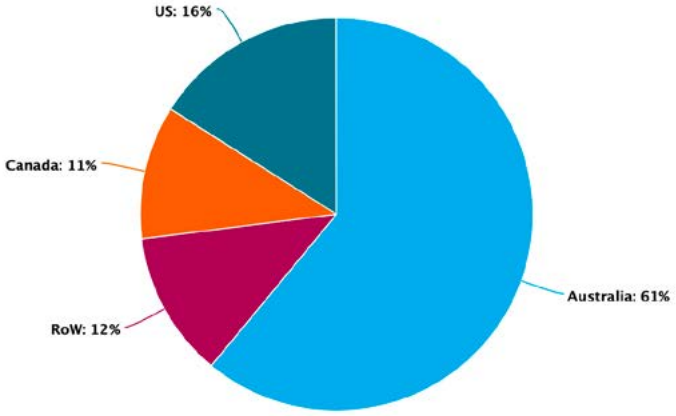
China is the world's biggest importer of iron-ore and metallurgical coal. The country imported 1.26-billion tonnes of iron-ore and 75-million tonnes of metallurgical coal in 2019.

The European Union (EU) is the second-biggest iron-ore importer at 147-million tonnes, while India is the second-biggest metallurgical coal importer at 53-million tonnes.

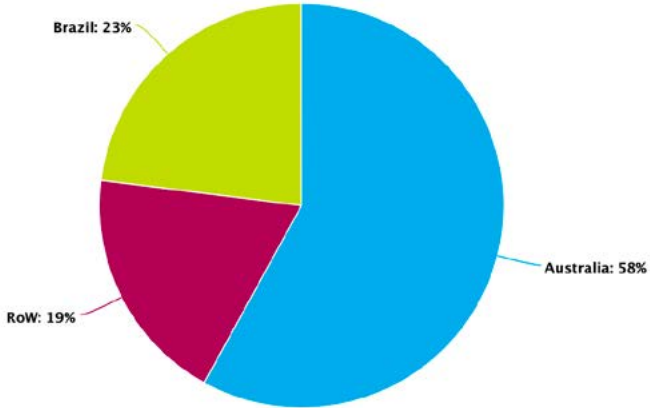
As steelmakers worldwide operate at reduced capacity in response to the demand shock in the construction, mechanical equipment, automotive and other downstream sectors, steel raw-material markets are being affected to a lesser or greater extent.

Australian iron-ore and metallurgical coal mining operations and logistics have proven to be resilient during the Covid-19 pandemic, and so has the second-biggest seaborne iron-ore supplier, Vale from Brazil.

Seaborne metallurgical coal supply in 2019



Seaborne iron-ore supply in 2019



Source: worldsteel
RoW – Rest of World

World trade in key steelmaking raw materials

World trade in iron-ore (million tonnes)			
	2019	2020	2021
World trade	1 760	1 775	1 795
Iron-ore imports			
	2019	2020	2021
China	1 263	1 276	1 297
EU	147	147	147
Japan	122	123	122
South Korea	74	76	76
India	5	5	5
Iron-ore exports			
	2019	2020	2021
Australia	836	892	907
Brazil	473	451	453
Ukraine	38	36	37
India	35	33	33

World trade in metallurgical coal (million tonnes)			
	2019	2020	2022
World trade	340	342	352
Metallurgical coal imports			
	2019	2020	2022
China	75	73	74
India	53	58	61
Japan	47	48	48
EU	41	42	43
South Korea	37	38	38
Metallurgical coal exports			
	2019	2022	2022
Australia	184	192	199
US	50	48	37
Canada	29	26	28
Russia	26	28	31

Source: Compiled from Australian government data

workforce-related operational difficulties. Brazilian regulators are also moving slowly on allowing Vale to resume mines that were closed in the wake of the January 2019 Brumadinho dam collapse. Vale has downgraded its 2020 production target to between 310-million and 330-million tonnes.

It is a mixed picture for iron-ore and metallurgical coal production elsewhere. In the US, mining continued to operate during lockdowns. The US is the second-biggest seaborne metallurgical coal supplier. Nevertheless, many iron-ore mines and coal mines in the US have been idled, owing to the economic downturns caused by the Covid-19 pandemic in that country and in the country's traditional coal export markets in Europe, India, Japan, Brazil and South Korea.

Nationwide lockdowns in South Africa and India, as well as operating restrictions for mines in some states in Canada, have caused reductions in mining production.

These three countries represented 10% of global seaborne iron-ore supply in 2019 and, hence, the aggregate impact of these disruptions on global supply is significant. However, restrictions have been relaxed and some mining companies have started operating again.

Meanwhile, three of the world's biggest iron-ore miners – Rio Tinto, BHP and Fortescue – are spending billions of dollars on new iron-ore projects in Western Australia. However, only a small portion of the new capacity will deliver export growth, as much of the new capacity will replace old mines when they reach the end of their lives.

Source B&T Steel

SOUTH AFRICAN STEEL MARKET

Once the cornerstone of manufacturing in the local economy, South Africa's steel industry is moribund. The decline of the economy has caused systematic harm to the entire steel industry, with each part facing different challenges.

Primary steel producers, such as ArcelorMittal South Africa (AMSA), are facing prohibitive input costs, unreliable transport and energy infrastructure, as well as low domestic demand, in addition to cheap imports.

Imports and weak demand are damaging midstream players such as Macsteel, Trident and Scaw Metals.

Downstream companies, such as engineering works, fabricators and manufacturers of tube and pipe, wire rods, fasteners, pressure valves and other engineering consumables, have to deal with their own challenges and have shed thousands of jobs in the past decade.

The domestic steel industry has been declining since 2010. The minimal economic growth and investment of the past years are visible in steel demand, which has fallen to its lowest level in 12 years.

The South African economy expanded by only 0.20% in 2019 – the lowest growth rate in a decade. Agriculture was the main drag on economic growth, but it was followed by the three key steel-using sectors – construction, mining and manufacturing.

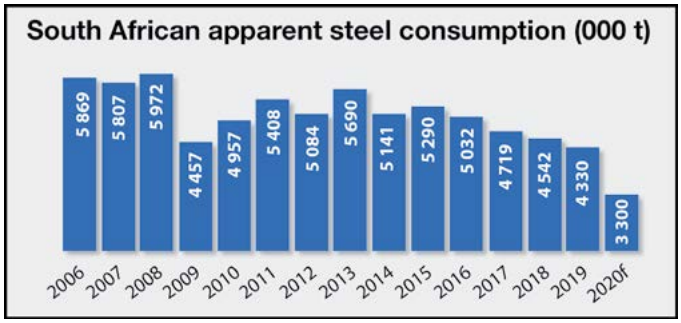
Manufacturing, including automotive (66%), building and construction (30%), and mining (4%) are the key users of finished steel products. Much of the steel defined as being used in manufacturing are actually being used in construction, underscoring the importance of building and infrastructure to the steel industry.

The construction industry is in a perilous state. At the end of 2019, the beleaguered industry was in its sixth consecutive quarter of economic decline.

Every 1 000 t of steel produced locally adds:

- R9.20-million to gross domestic product;
- three jobs directly and three indirectly;
- domestic procurement spend of R5.30-million, of which R500 000 is spent with small, medium-sized and microenterprises.

Source: South African Iron and Steel Institute



Source: Department of Trade, Industry and Competition
f – forecast

South Africa's apparent steel consumption was 4.33-million tonnes in 2019, compared with 4.54-million tonnes in 2018. With steel consumption falling below 4.50-million tonnes and imports maintained at one-million tonnes, South Africa had surplus steelmaking capacity of 3.50-million tonnes in 2019, according to the Department of Trade, Industry and Competition (DTIC).

The lockdown that South Africa entered on March 27, 2020, owing to Covid-19, will have a significant impact on steel demand in the country. The DTIC is forecasting that demand will fall to 3.30-million tonnes this year.

As South Africa advanced to Level 3 in the risk-adjusted approach to the easing of the lockdown on June 1, 2020, AMSA said that it would be "many months, if not years", before the economy started to revive and the demand for steel began to increase again.

While domestic demand is weakening, AMSA is also struggling to maintain its export market. The company reports that its export markets continue to be subject to dumping by international producers – many of them unfairly subsidised – which ship steel to East and West African countries in increasing volumes.

Meanwhile, imports continue to plague the steel industry. AMSA reports that cheaper steel imports remain a "considerable challenge", despite the imposition of limited import protections on some flat steel products. In 2019, primary steel imports rose by 15% to 918 000 t.

AMSA notes that the impact of steel imports on steel fabricators and manufacturers is also severe, stating that in 2019, about 1.50-million tons were imported, of which 663 000 t were of Chinese origin. Imports from Russia and Taiwan also increased substantially.

Chinese businesses are offering steel products at a cost that is below that of production costs in South Africa, Macsteel CEO Mike Benfield was quoted as saying in an October 2019 article published in online publication Daily Maverick. "The writing was on the wall when we, as the largest reseller of tube and pipe, found we could buy product cheaper than at the base cost of production."

Several midstream and downstream steel businesses have closed down in recent years. When the 90-year old Robor Steel – one of South Africa's biggest steel pipe producers – went into liquidation in October 2019, the company's demise was blamed on South Africa's weak economic performance, cheaper Chinese imports and failure by government to not extend import duty and tariff protections to downstream industries. The imposition of import duties by the US on imported steel further plagued Robor's sales of specialised steel pipe into the US oil and gas industry, which was previously a lucrative export market. The company also said that delays in the signing of independent power producer agreements and the financial demise of State-owned power utility Eskom contributed to its woes.

Robor worked hard to survive, even securing permission from competition authorities in January 2019 to merge with a competitor – Macsteel's tube and pipe business – under the "failings firms" principle.

GOVERNMENT SUPPORT

South Africa, like many other countries, is grappling with the continuing steel crisis characterised by global excess capacity and exacerbated by weak economic recovery. Primary steel producer AMSA approached government for support in late 2014 for an intervention to protect it from cheap imported steel.

From 2000 to 2016, steel imports surged 250%, mostly from China. This led to the imposition of tariffs to protect AMSA, and while it has led to a reduction in imported steel, finished goods are still being imported at the expense of the local manufacturing sector.

AMSA CEO Kobus Verster says duties have been effective in reducing imports from China. Imports from Taiwan and Russia have increased materially, as imports from these countries were initially below the volume threshold to trigger the safeguard. Taiwan had since breached the threshold and is subject to the duty, but imports from Russia remain below the stipulated limited.

AMSA said in February 2020 that it had applied for new safeguard duties on certain types of steel, in addition to the prevailing base protection in steel imports of 10%.

Verster agrees that downstream steel fabricators remain vulnerable, as tariff protection has not been extended to imported semifinished and finished steel products.

Steel support measures

The onset of the steel crisis in late 2014 resulted in South Africa's dominant steel producer, Arcelor South Africa's (AMSA's) approaching government for support, demonstrating a willingness to engage on legacy battles pertaining to pricing and investment.

The first support measures put in place were to increase the general rate of customs duty on primary steel products to 10%, to increase the tariff on a range of downstream products and deploy various rebates.

A Steel Development Fund of R1.50-billion was established in 2017 to support key downstream steel sectors/subsectors.

An agreement was also reached with AMSA on a set of principles for appropriate flat steel pricing in South Africa to ensure that upstream steel mills and downstream steel-dependent industries remain competitive and sustainable.

To further increase industry competitiveness, government retracted the deeming of primary steel in designated products (requiring the use of locally manufactured primary steel) and designated downstream steel-intensive construction steel products and components. This meant that all steel would be sourced locally.

Source: Department of Trade, Industry and Competition

Meanwhile, a new steel master plan is being developed to improve short- and long-term industry prospects, strengthen a range of regional and global value chains, and boost technological and export competitiveness.

Trade and Industry Minister Ebrahim Patel is leading the development of the plan and has appointed Dr Bernie Fanaroff to coordinate the efforts through meetings with various stakeholders.

President Cyril Ramaphosa said in February 2020 that it would be finalised in the next six months.

Steel and Engineering Industries Federation of Southern Africa (Seifsa) supports the master plan and argues that a sector-based approach, in line with the Industrial Policy Action Plan, is necessary to deal with existing constraints. Although overlapping, the prevailing challenges faced by the various metals and engineering sector subcomponents are unique to each subcluster.

Therefore, seeking a blanket solution is difficult, hence the closure of companies despite government's best efforts to assist, the association argues.

The proposed master plan, however, does not have the support of the National Employers' Association of South Africa (Neasa), as the proposed plan is "riddled with support for import duties" to protect AMSA, says Neasa CEO Gerhard Papenfus. Neasa argues that the duties prevent the downstream steel industry from importing cheaper steel.

AMSA seeks import protection on hot-rolled coil and heavy beams

Steel producer ArcelorMittal South Africa (AMSA) submitted two separate applications to the International Trade and Administration Commission of South Africa (Itac) requesting import protection on hot-rolled coil (HRC) and heavy structural beams in July 2020.

The HRC application seeks to extend an 8% safeguard duty already in place beyond its August 2020 expiry date.

The safeguard duty is imposed in addition to the 10% base protection that applies to HRC imports to South Africa, as well as to most other primary steel products.

AMSA secured a safeguard duty on HRC for a three-year period in 2017, beginning in August of that year and instituted on the basis of a sliding scale.

The initial duty rate was 12% above the 10% base protection level.

The safeguard duty then declined to 10% from August 2018 and then fell to 8% from August 2019.

CEO Kobus Verster said in July 2020 that the group's application to Itac was for an extension of the safeguard duty at 8%.

He also reported that it had made an application for protection on heavy beams manufactured at the Highveld Structural Mill, in Mpumalanga.

The eMalahleni mill was restarted in April 2017 after Highveld, which entered business rescue in 2015, concluded a contract manufacturing agreement with AMSA.

In 2019, AMSA announced that it intended buying the mill, which is Africa's only producer of heavy structural steel.

The proposed transaction had yet to be completed, but Verster indicated that AMSA remained interested in the acquisition.

AMSA did not request a specific level of import protection to be imposed on imported heavy structural beams, but instead outlined its case to Itac for the imposition of a safeguard duty.

Verster said imports still represented 19% of apparent steel consumption of 1.80-million tons, which itself represented a 26% year-on-year decline.

Major source countries of imports are China, Europe, Japan, Russia and Taiwan, with China and, particularly Russia, proving to be the most disruptive. "Itac made an assessment in September 2019 that Russia no longer qualified for exemption from safeguards on HRC products. Ten months later, the decision is still to be Gazetted and implemented, despite numerous letters from the company urging action," Verster noted.

Source: *Engineering News*

Papenfus says government must choose between protecting AMSA, or breaking the "stranglehold" that these duties have on the downstream steel industry, which operates across many sectors and employs more than 500 000 people. "It cannot be expected of downstream manufacturing to be the casualty of AMSA's salvation," he says.

In an opinion piece in Business Day, Papenfus says that, since 2015, when the duties were imposed, about 1 000 companies have been liquidated. In addition, more than 300 companies have been put into business rescue.

"The protection of ArcelorMittal is not solely responsible for this, though it is a major contributor to the industry's woes. Government's commitment to protect ArcelorMittal, regardless of the devastating impact it has downstream, remains a mystery," he says.

Papenfus believes that if these duties had not been introduced, AMSA would still have existed, albeit not in its current form and not as a monopoly.

On August 3, 2020, Neasa filed an urgent application in the Gauteng High Court to stop the International Trade Administration Commission of South Africa (Itac) implementing a 10% import tariff, and custom duties on coated flat-rolled products.

The association explained that should this export tax rate be granted, as well as AMSA's application for 120% safeguard duties on certain long products, as well as for the extension of the safeguard duties of 8% on hot-rolled coil, then hot-rolled coil would carry a total duty of 18%.

However, AMSA said in July 2020 that it had not approached Itac to ask for safeguards on long steel products in general, noting that structural steel products represented only 5% of the long steel products market in South Africa.

The steelmaker previously argued that Neasa's statement was "inaccurate and misleading", pointing out that the application had not been for a 120% safeguard duty. "In fact, the application does not propose any level for the safeguard duty. A safeguard application presents the facts and, based on those facts and after a comprehensive investigation, Itac will decide whether to grant a safeguard and, if so, at what level it should be placed," the steel producer said at the time.

It said the global oversupply of steel had been exacerbated by a significant drop in demand owing to the Covid-19 pandemic and that protectionist measures taken by other regions, for example the US and European Union, had contributed to more steel being transported over long distances.

Neasa has argued that attempts by AMSA for more protectionist duties amid the current severe backlogs, caused by its inability to supply the market, are absurd.

In an update on Neasa's High Court application, *Engineering News* reported on August 14 that Neasa had withdrawn its application after AMSA and Itac filed papers in response to the application. AMSA said Neasa's application had no merit and was premature, given the comprehensive due diligence process that still needed to be undertaken by Itac before a final decision on legislation was made.

AMSA remains convinced that safeguards are an essential part of the suite of protection measures that are in place to protect the entire South African steel industry from imports.

The DTIC argues that South Africa has to maintain its capacity in primary steel production to enable the country to benefit from the regional opportunities that may arise from the African Continental Free Trade Area, which came into effect in July 2020.

PRICING

In exchange for trade support, AMSA has agreed to a set of principles for flat steel pricing. The prices AMSA charges domestic customers for its flat steel are determined by a basket of international realised prices.

In line with weaker growth in steel demand, international prices softened substantially in 2019. The benchmark China hot-rolled coil (HRC) free-on-board (FOB) prices declined by 13% and rebar (China FOB) declined by 10%.

In flat steel, price swings were particularly pronounced during the year, HRC loaded for shipping from China traded at $512/t in the first quarter of 2019 and a $452/t in the final quarter of the year.

The steep downward correction in international steel prices came at a time of rising iron-ore costs. Global iron-ore prices reached multiyear highs in 2019, owing to supply disruptions because of iron-ore miner Vale's fatal dam collapse, in Brazil, and reduced output from BHP and Rio Tinto, in Australia. The supply disruptions, combined with increased demand, contributed to an iron-ore price rally. Iron-ore prices started 2019 at about $75/t and peaked at $125/t. Prices moderated towards the end of the year, finishing 2019 at about $91.50/t.

Meanwhile, Seifsa chief economist Dr Michael Ade expects steel price volatility to continue this year. Traditionally, slower steel demand growth has a negative impact on domestic steel prices and he expects the trend to continue in the near term.

SCRAP METAL

The scrap metals industry contributes about R15-billion to South Africa's economy and employs about 350 000 people, many of whom are involved in the informal collection of scrap metal. The sector has been badly affected by the downturn in economic activity as a result of the Covid-19 pandemic.

The biggest users of ferrous scrap in South Africa are steel mills, such as Scaw Metals, Cape Gate, Unica, Fortune Steel and Veer Steel, followed by the foundries.

The country exports significant quantities of scrap metal, which is a major feedstock for mills and foundries. Steps taken over the years to improve domestic scrap availability have been broadly supported by scrap-consuming industries, but resisted by scrap metal recyclers.

Since 2013, the export of scrap metal has been undertaken in line with government's price preference system (PPS), in terms of which scrap must first be offered for sale to domestic consumers at a discount to a locally benchmarked price.

Many countries impose taxes to stop the export of scrap metals. South Africa's scrap-metal exports are estimated at about 1.50-million tonnes a year, or about 40% of the total collected stock.

Finance Minister Tito Mboweni mooted the introduction of an export tax on scrap to replace the PPS in his February 2019 Budget and a year later, the Minister announced the proposed export taxes that would apply to ferrous metals at R1 000/t, aluminium at R3 000/t, red metals at R8 426/t, and other waste and scrap metals at R1 000/t. A clampdown on exports is consistent with government's policy of promoting local beneficiation and stimulating the manufacturing sector.

Mboweni said in February 2020 that consultation with affected industries had begun. This reform aimed to improve the availability of better-quality scrap metal at affordable prices for domestic foundries and mills, the Minister added.

In July 2020, Trade, Industry and Competition Minister Ebrahim Patel issued a trade policy directive to Itac to urgently investigate measures to help support the metals industry. Itac investigates customs tariffs, trade remedies, and import and export control.

"Due to the steep global increase in prices and reduced economic activity, the industry has called on . . . government to urgently assist it. I have therefore issued a trade policy directive to Itac to urgently investigate the market conditions around the demand-supply imbalance in the scrap metal industry as a result of Covid," Patel said.

The objective of the investigation is to determine appropriate amendments to the PPS guidelines that can address the shortage in affordable good quality scrap metal.

No ferrous and nonferrous waste and scrap of any type may be exported for the period of the investigation, unless Itac determines that it will not be used by the domestic processing industry. This will

not affect existing export permits or applications made before the date of the notice in the Government Gazette.

"Whatever measures we take now are temporary to deal with this immediate challenge created by the Covid-19 pandemic, but they also lay the basis for the new steel industry master plan," Patel said.

Seifsa, which represents 22 employer associations in the broad metals and engineering sector, has welcomed the new interventions.

"We have previously stated our support for the principle of the nonexport of scrap metal and are heartened by . . . government's decision to support the industry during this difficult time of the pandemic, even as we await a longer-term solution to protect the industry through possible taxes on scrap metal exports," Seifsa CEO Kaizer Nyatsumba has said.

Seifsa has in the past supported an export tax on scrap metal owing to challenges in the metals industry, including price increases for all main inputs in the sector and reduction of volumes of scrap as a result of the increased cost of overheads in the recycling sector.

Steel manufacturer, merchandiser and distributor Macsteel has argued against the proposed introduction of an export tax. In a May 2019 blogpost published on its website, Macsteel says that such a tax may be contradictory policy. While an export tax will result in more steel being produced from scrap, it will have negative consequences on the producers of primary steel from iron-ore. AMSA is the only producer of this kind in South Africa and is already protected by government.

Macsteel also claims that certain steel produced from scrap in South Africa is of inferior quality to that produced from iron-ore. High-quality steel could become more expensive, as it may need to be imported if primary steel producers find themselves in more difficulty, resulting in goods being produced domestically from high-quality steel becoming more expensive.

The company says markets should not be regulated in favour of any one constituent party of a sector over another. "Market forces should be left to themselves to create equilibriums in supply and demand. There are just too many unintended consequences created as a result of regulation, making support for any regulation impossible. It is clear that efficient and cost-effective producers and supply chain participants need to emerge through a natural selection process rather than one which is forced or regulated," Macsteel contends.

In August 2020, National Treasury and the South African Revenue Service (Sars) published, the various draft taxation documents, including the proposed introduction of an export tax on scrap metals for public comment.

PRIMARY STEEL PRODUCERS

ArcelorMittal South Africa

ArcelorMittal South Africa (AMSA) is part of the world's leading steel producer, Luxembourg-headquartered ArcelorMittal, and is South Africa's leading primary steel producer.

ArcelorMittal South Africa capacity			
Flat steel products			
	2019	**2018**	**2017**
Vanderbijlpark Works	**Capacity: 2.90-million tonnes a year**		
Capacity utilisation	68%	85%	81%
Lost-time-injury frequency rate	0.47	0.31	0.38
Revenue	R22.40-billion	R25.50-billion	R22.50-billion
Liquid steel production	1.97-million tonnes	2.48-million tonnes	2.34-million tonnes
Saldanha Works (closed in Q2 2020)	**Capacity: 1.30-million tonnes a year**		
Capacity utilisation	72%	84%	86%
Lost-time-injury frequency rate	0	1.81	0.62
Revenue	R7.60-billion	R8.70-billion	R7.90-billion
Liquid steel production	930 000 t	1.09-million tonnes	1.12-million tonnes
Long steel products			
Newcastle Works	**Capacity: 1.90-million tonnes a year**		
Capacity utilisation	66%	81%	76%
Lost-time-injury frequency rate	0.41	0.55	0.40
Revenue	R15.70-billion	R14.90-billion	R11.80-billion
Liquid steel production	1.51-million tonnes	1.53-million tonnes	1.45-million tonnes

Source: AMSA

With yearly production capacity of 6.50-million tonnes of liquid steel, AMSA is sub-Saharan Africa's biggest steel producer. However, the company is producing well below its capacity and reported output of 4.40-million tonnes of finished primary steel products in 2019.

AMSA produces flat steel products, including slabs and heavy plates, as well as HRC, cold-rolled and coated products, at its Vanderbijlpark Works, in Gauteng.

Long steel products, including bars, billets, blooms, hot-finished and cold-drawn seamless tubes, windows and fencing profiles, are produced at Newcastle Works, in KwaZulu-Natal, and Vereeniging Works, in Gauteng.

It also owns the idled Saldanha Works, which produced high-quality ultrathin HRC. The plant, in the Western Cape, was placed on care and maintenance in the second quarter of 2020.

From batteries at its Vanderbijlpark, Newcastle and Pretoria operations, the coke and chemicals division produces metallurgical coke for AMSA's furnaces at its Vanderbijlpark and Newcastle Works, and commercial coke for sale to, especially, the ferroalloy industry.

The business also processes and beneficiates metallurgical and steel by-products, including coal tar. These are sold as raw materials for a wide variety of uses.

Financial and operational performance

While the company – and much of the world's primary steel industry – enjoyed substantial successes in 2018, the financial results were not repeated in 2019. In fact, AMSA reports that the 2019 financial year has been the most challenging for the world steel industry since the global financial crisis and that it has been an "exceptionally difficult" year for the company.

The steelmaker reports that 2018's better financial result – with headline earnings of R968-million – was not derived from domestic demand, but was rather the result of one-off firmer international primary steel prices.

In 2019, South African demand declined again, while AMSA encountered heightened competition from numerous exporters in its traditional African markets amid softening world prices and the long products markets, in particular, having to deal with a growing influx of new, largely scrap-consuming, producers.

The company's capacity utilisation reduced from 84% in 2018 to 68% in 2019. Liquid steel production fell by 13%, or 681 000 t, from 5.10-million tonnes to 4.40-million tonnes in 2019.

Revenue decreased from R45.27-billion in 2018 to R41.35-billion in 2019. The lower revenue stemmed from weaker domestic and export sales volumes, which declined by 11% and 1% respectively.

ArcelorMittal South Africa financial and operational performance

Financial results	2019	2018
Revenue	R41.35-billion	R45.27-billion
Earnings before interest, tax, depreciation and amortisation (Ebitda)	(R632-million)	R3.61-billion
Ebitda margin	(1.50%)	8.0%
Headline earnings/(loss) a share	(299c)	89c
Headline earnings/(loss)	(R3.27-billion)	R968-million
(Loss)/profit from operations	(R2.36-billion)	R2.78-billion
Operational results		
Flat steel products sold	2.66-million tons	3.10-million tons
Domestic market	2.07-million tons	2.24-million tons
Export market	594 000 t	856 000 t
Long steel products sold	1.45-million tons	1.39-million tons
Domestic market	902 000 t	1.10-million tons
Export market	551 000 t	298 000 t
Coke and chemicals		
Market coke	152 000 t	158 000 t
Tar	77 000 t	81 000 t

Source: ArcelorMittal South Africa

International sales prices, which determine AMSA's export and domestic realised prices, fell by an average of 15%, but the impact was neutralised by a weakening in the value of the rand to the US dollar.

Raw material costs increased sharply in 2019. The raw material basket represented 51% of its total costs in 2019, with iron-ore prices rising 22%. Measured in rand terms, the raw material cost base increased by 12%.

The company argues that the correlation between steel prices and raw material costs has "broken down". Although raw material prices moderated in the second half of 2019, the dislocation continues. AMSA believes that "developmentally priced" iron-ore is vital to enable it to compete with scrap-based steel producers in South Africa while improving its international cost competitiveness, given that the company is at a locational disadvantage, far from major export markets.

Despite significant savings from the business transformation programme that AMSA embarked on in the third quarter of 2018, its cash cost of liquid steel increased by 12% to R8 615/t in 2019.

In the six months to June 30, 2020, AMSA's cash cost a tonne of liquid steel increased by 21%, largely driven by lower liquid steel production of 54%, as a result of the lockdown and unreliable service delivery from State-owned enterprises, Transnet and Eskom, in the first quarter.

The company initially stated that it would aim to achieve a cost saving of $50/t of steel by 2021, and while this is still achievable, AMSA is instead focusing on a target of $58/t by 2023. With Saldanha being mothballed, these savings will increase to $69/t.

AMSA booked a loss of R4.68-billion in 2019, compared with a profit of R1.37-billion in the comparative period. The 2018 profit included the profit on the disposal of the investment in Macsteel of R415-million.

Net impairment charges for 2019 amounted to R1.40-billion against R10-million for 2018.

AMSA posted a headline loss of R3.27-billion in 2019, after adjusting for the net impairment and loss on disposal of assets of R1.40-billion, compared with headline earnings of R968-million in 2018.

In the six months to June 30, 2020, AMSA reported a 54% slump in liquid steel production from 2.50-million tonnes to 1.10-million tonnes, and a 47% decrease in sales volumes to 1.10-million tons. Overall plant utilisation decreased from 76% to 35% during the period, when average international steel prices fell by 13%.

The group's R2.61-billion loss for the period was far larger than the R638-million loss reported for the corresponding period in 2019 and followed on from the R3.27-billion headline loss declared for the full 2019 financial year.

The company's half-year vearnings before interest, tax, depreciation and amortisation slumped from a profit of R167-million to a loss of R1.30-billion, while revenue fell 45% to R12-billion.

The group expects sales to recover in the second half of the year, but to remain about 30% below its original budget for 2020.

Meanwhile, AMSA shut down its steel plants during the national lockdown, which started in late March 2020. During this time, it maintained minimal operations at its coke batteries to avoid lasting damage, with skeleton staff providing care and maintenance.

When the country moved to Level 3 in the risk-adjusted approach to the easing of the national lockdown on June 1, AMSA was allowed to operate with 100% of its workforce. However, AMSA says it will fully restart operations only when demand for steel becomes visible in the order book.

Restructuring

AMSA warned in July 2020 that it expected steel demand to remain subdued for the foreseeable future, and indicated that it was forging ahead with a large-scale labour reorganisation to "significantly rightsize" its cost base and footprint. The restructuring is geared towards improving the sustainability of a business that has made a profit only once – that being in 2018 – in the past ten years.

The company currently employs about 7 000 people directly, as well as 1 800 contractors and has noted that over the past

AMSA to procure hard coking coal from Makhado

Coal miner MC Mining has signed an offtake agreement with steel producer ArcelorMittal South Africa (AMSA), which will buy hard coking coal (HCC) from Phase 1 of the Makhado coking coal project.

As South Africa has a limited production of high-quality metallurgical, or coking, coal, AMSA and other coke producers currently have to import HCC to manufacture metallurgical coke, a key ingredient in steel production.

Under the terms of the agreement, AMSA will buy at least 350 000 t/y of HCC from Makhado Phase 1 and has the right to acquire a further 100 000 t/y.

The agreement spans the shorter of ten years or the Phase 1 life-of-mine.

HCC will be delivered to the Musina siding and railed to AMSA's Vanderbijlpark and Newcastle operations, in Gauteng and KwaZulu-Natal respectively.

Source: *Mining Weekly*

Solar PV potential at Vanderbijlpark mill

Steel producer ArcelorMittal South Africa (AMSA) believes that there is potential to develop a 75 MW to 100 MW solar photovoltaic (PV) power plant adjacent to its Vanderbijlpark mill, in Gauteng. The JSE-listed company is also convinced that such a project could proceed relatively quickly, should South Africa's regulatory framework be adapted to support generation projects larger than 10 MW and be developed on the back of a long-term offtake agreement with an independent power producer.

CEO Kobus Verster says AMSA is not in a position to set aside capital for a solar PV plant, but there is a strong business case for entering into a multidecade power purchase agreement with a third-party supplier, which could locate its solar plant on the AMSA-owned land.

AMSA is also studying the potential of converting waste gas generated during steelmaking into electricity. The company already produces about 8% of its own electricity through such recovery processes.

Verster estimates that there is potential to develop between 30 MW and 40 MW of waste-gas-to-power capacity, but emphasises that it will be an in-house project and could, thus, be pursued only once AMSA has developed greater financial resilience.

In the interim, the group will prioritise programmes designed to reduce consumption and improve energy efficiency. AMSA, which has an electricity requirement of between 400 MW and 500 MW, currently consumes about 700 kWh of electricity to produce a ton of steel.

Another key focus is electricity tariffs, with AMSA's electricity bill amounting to R3.30-billion in 2019.

The group failed in its attempt to secure a two-year preferential tariff from Eskom under the negotiated price agreement framework.

Source: *Engineering News*

year it has cut 1 500 direct jobs and 1 500 subcontractor jobs, as a result of decisions to place Saldanha Steel on care and maintenance and to reduce production at Newcastle to about 65% of its nameplate.

The first phase of the strategic asset footprint review resulted in a decision to close Saldanha Works. The steel plant, which was built 20 years ago to service export markets, produces a unique product – thin gauge coil – but has been unable to compete with Chinese steel imports in West and East Africa.

Increases in regulated input costs, including electricity, rail and port tariffs and raw materials, negatively impacted on Saldanha Works.

From 2010 to 2019, the plant's iron-ore costs more than tripled, its coal costs have escalated by 177% and the plant's electricity cost has risen by 218%. Port handling fees have also risen steeply.

AMSA attributes the iron-ore cost surge to the plant's reliance on a single iron-ore supplier, JSE-listed Kumba Iron Ore, and the technology within the plant. Until 2016, Saldanha Works incurred lower prices for its iron-ore than those paid by Newcastle and Vanderbijlpark.

From 2016, Saldanha Works was obliged to pay export parity-based pricing, which is what Kumba could obtain for exporting its raw iron-ore without any local beneficiation or value-add to the national economy.

Coal costs have also risen sharply, as coal miner Exxaro reduced Saldanha Works' yearly allocation, forcing it to source supplies from alternative suppliers in Mpumalanga. AMSA has said that rail costs were so punitive that it was more affordable for the company to transport the coal from Mpumalanga to Richards Bay, in KwaZulu-Natal, by rail and then ship it by sea to Saldanha Bay.

AMSA needed to secure R4-billion a year in savings on its cost base from suppliers and labour. The Department of Trade Industry and Competition (DTIC) says it has secured commitments of more than R500-million from Eskom, Transnet and Kumba, as well as labour productivity commitments from unions, but that AMSA has rejected this as insufficient. The plant has been under care and maintenance since the end of March 2020.

Government has urged AMSA to engage with interested parties in acquiring or partnering with the company to save Saldanha and maintain jobs. Engagements with three potential parties were initiated, but the DTIC said in April 2020 that the results to date were not positive.

The interested parties include companies, which could potentially bring in the cost-saving support that the steel plant requires; a downstream participant that has synergies with the Saldanha plant; and a mini-mill participant with iron-ore mining resources.

The second phase of the review will focus on long-steel products, which is produced at the Newcastle Works. Although Verster previously said that he was not optimistic that alternatives could be found to the structural issues undermining Newcastle's competitiveness, he confirmed in March 2020 that the closure of significant long-steel product processes, including primary steelmaking at Newcastle, was not expected.

The distance of the Newcastle Works from its sources of raw materials has made the operation sensitive to logistics costs, which have continued to escalate in recent years.

The mill's problems have been further exacerbated by weak domestic demand for the long-steel products produced at Newcastle Works. These products are highly leveraged to the country's infrastructure spend, which has declined amid persistently weak economic growth, fiscal constraints and the dire position of several infrastructure-focused State-owned companies.

While AMSA faces no domestic competition in the flat-steel market, there are various scrap-based competitors in long-steel segments, leading to a substantial oversupply in the Newcastle Works product range.

As part of the restructuring, AMSA plans to reconfigure the company's operating model into a single platform.

The company warned in June 2020 that it was considering a large-scale restructuring and that a number of jobs might be affected.

On June 18, the company announced a large-scale labour reorganisation in terms of Section 189(3) of the Labour Relations Act, following a significant slump in steel demand after South Africa instituted a lockdown in response to the Covid-19 pandemic.

On July 30, CEO Kobus Verster said that the company aimed to negotiate a "multifaceted, flexible solution" in response to its reduced production footprint and the temporary idling of some operations.

He would, however, not comment on the number of jobs that could be shed, saying this was still the subject of formal consultations with its unions.

Verster said that AMSA had a firm target of reducing its fixed costs by 30% in line with its lower volumes, but that it was not proposing a "blanket reduction" in its headcount.

Instead, the company had suggested that the cost reductions could be achieved through salary sacrifices, flexible working hours, alternative shift arrangements and insourcing. Verster argued that such outcomes would be "more humane" in light of South Africa's unemployment crisis.

Nevertheless, he emphasised that AMSA "must find ways to secure significant cost savings if the business is going to survive".

Verster did, however, express some optimism that infrastructure would feature strongly in South Africa's economic recovery plan, which was being finalised by government.

Government's previous infrastructure promises have failed to materialise, but there have been some indications that the plans are being firmed up this time round.

Public Works and Infrastructure Minister Patricia De Lille published a Gazette notice on July 24, which included 50 Strategic Integrated Projects and 12 Special Projects that would be given priority attention by government.

The list included 15 transport projects valued at R47-billion, 11 water and sanitation projects valued at R106-billion, 18 human settlements developments valued at R138-billion, two agricultural and agroprocessing projects valued at R7-billion, three energy projects valued at R58-billion and a digital infrastructure initiative valued at R4-billion.

"We have heard repeatedly that infrastructure investment and development will be a key enabler of the economic recovery and this must be addressed with urgency if businesses are to deliver inclusive economic growth," Verster said.

He added that further opportunities could also arise once the Steel Masterplan, which was in the final stages of drafting, was released.

The masterplan is one of several being pursued by the Department of Trade, Industry and Competition and is being designed to address constraints to higher levels of steel manufacturing in South Africa.

Environmental compliance

AMSA has been investing significant capital in improving its environmental performance. In the past ten years, the company has invested more than R1.30-billion in environmental capital expenditure (capex) and maintenance projects.

In 2019, its capex on environmental controls was R151-milion, which is 44.50% higher than that of 2018 and 3.7 times the amount spent in 2017.

AMSA invested R340-million in 2010 on building a new coke gas-cleaning installation in Vanderbijlpark. This facility, however, has experienced operational challenges and in August 2018, the Gauteng government issued the company with a compliance notice pertaining to its air emission licence (AEL).

The notice directed AMSA to reinstate the gas-cleaning facility within 30 months of orders, with the necessary equipment being placed.

In March 2019, the company signed an engineering, procurement and construction contract, thereby triggering the 30-month period.

A potential delay in starting the work arose after required amendments to the record of decision was approved only in October 2019.

Once complete, the project will reduce Vanderbijlpark Works' sulphur emissions by 30%, which it says will improve compliance levels pertaining to hydrogen sulphide emissions.

The company acknowledges in its 2019 integrated report that meeting strict new standards set in terms of the Air Quality Act may remain challenging.

AMSA received a summons in June 2019 instituting criminal proceedings for three charges pertaining to transgressions of its AEL at Vanderbijlpark during 2016. The charges pertain to allegedly conducting certain activities without the emissions licence and failure to adhere to the licence. The matter was settled in June 2020, when AMSA's plea agreement with the prosecution was accepted by the court. The company agreed to pay a R3.64-million fine as a settlement for transgressions of the AEL at Vanderbijlpark during 2016.

In its 2019 integrated report, AMSA states that its sinter main stack was compliant until the end of October 2019, where after a period of noncompliance followed until January 2020. From February 2020, the plant was compliant again, owing to a major bag filter refurbishment.

There were also other noncompliances recorded at Vanderbijlpark in 2019, mostly pertaining to the availability of abatement systems as specified in the AEL. The company has been working on installing a fume capture and destruction facility at the tar plant, which will enable it to meet AEL requirements.

The steelmaker will also continue improvement efforts at some older batteries in 2020 to ensure compliance.

Compliance levels of particulates at some of the older batteries also need to improve and further efforts will be made to achieve the required new plant standards.

Further, AMSA has made a so-called 'postponement application' to comply with new regulations under the Air Quality Act, which places considerable burdens on primary manufacturers. If applications are granted, the stricter standards may be delayed until 2025.

At the coke-making operations, AMSA requested an amendment of the strict hydrogen sulphide standard.

Evraz Highveld Steel and Vanadium

Evraz Highveld Steel and Vanadium (Highveld) was South Africa's second-biggest primary steel producer. Highveld was established in 1966 as an integrated steel manufacturer and a leader in vanadium production, owned by mining group Anglo American.

In 2007, Russia-owned Evraz bought Highveld Steel, which experienced sustained financial losses, owing to operational and market factors, resulting in the South African steel business being put into business rescue in April 2015. This resulted in Highveld Steel's closing down and about 2 000 workers losing their jobs.

The Highveld mill, in eMalahleni, Mpumalanga, was restarted in April 2017 after Highveld concluded a contract manufacturing agreement with AMSA. Under the agreement, AMSA supplied blooms and slabs to Highveld subsidiary Highveld Structural Mill (HSM) for processing into heavy structural steel, sold to the construction, infrastructure, mining and general engineering sectors. AMSA also secured an option to buy the HSM business.

AMSA announced in August 2019 that it intended acquiring HSM for an initial R150-million, plus a possible further R150-million, conditional upon its securing a long-term offtake agreement to supply the mainline rail industry. The Competition Tribunal in February 2020 approved the acquisition.

HSM is Africa's only producer of heavy structural steel and the continent's only operation able to manufacture railway lines. The Department of Trade, Industry and Competition (DTIC) reports that discussions are under way between AMSA, State-owned freight operator Transnet and the State-owned Industrial Development Corporation to form a joint venture to localise the production of heavy rails that meet the technical specifications for mainline and heavy-haul dedicated rail lines. These rails are currently imported by Transnet and passenger rail group.

The DTIC also reports that the Highveld railway siding – the second-biggest in the country – now supports junior miners, which do not have access to the Richards Bay Coal Terminal (RBCT), in KwaZulu-Natal, to export their coal using Highveld as a storage site. Since the reopening of the site in December 2016, about 3.22-million tons of coal have been transported from Highveld to the RBCT.

The department is also working with Highveld to restart the four iron-processing plants. Highveld has reached an agreement with chrome mining miner SAIL Mining to process chrome into ferrochrome. This will reopen one of the iron plants. The DTIC is hoping that a condition for the buyers of Highveld's Mapochs mine to supply vanadium ore to Highveld will result in the re-opening of the second iron plant.

Given the availability of water, energy and gas supply at the Highveld site, the rest of the property was converted into an industrial park, which currently has 52 tenants.

STAINLESS STEEL MARKET

Stainless steel represents one of the more recent groups of engineering materials. Although invented at the beginning of the twentieth century, it took several decades before its use became widespread. It was not until after World War II that modern stainless steels were developed and commonly used.

The single most important property of stainless steel is corrosion resistance. Corrosion resistance, in combination with good mechanical properties and manufacturing characteristics, has helped establish stainless steel as a versatile material.

Global stainless steel production has been on an upward trend for decades, outperforming other metals, registering compound growth of 5.33% a year from 1980 to 2019, according to the International Stainless Steel Forum. Although production increased from 50.73-million tons in 2018 to an all-time high of 52.22-million tons in 2019, growth slowed to 2.90% from 4.80% in the previous year.

Steel analysis company MEPS International has forecast that global stainless steel output will decrease by about 10% in 2020 to an estimated 46.80-million tonnes. This will be the lowest yearly figure since 2016.

The Covid-19 pandemic has negatively affected supply and demand. Stainless steel producers, stockists and end-users were forced to restrict or suspend their operations either because of government instructions or to a lack of orders.

MEPS estimates that global crude stainless steel output, during the first three months of 2020, was down by an estimated 9% year-on-year.

In South Africa, a lack of economic activity has resulted in the local stainless steel industry contracting over the past two years, the Southern African Stainless Steel Development Association (Sassda) reports. The organisation says the level of activity in the local sector's value chain has dwindled in the past decade, owing to international competition, low steel prices and the slow growth of the domestic economy.

Domestic apparent consumption of stainless steel contracted by about 10% in 2019, owing to economic uncertainty and the scarcity of major projects during the year, mirroring the behaviours of the main consumer sectors, especially the automotive industry.

At the start of 2020, Sassda acting executive director Michel Basson told *Engineering News* that the organisation did not expect the year to be one of substantial growth for the local stainless steel market.

The national lockdown has compounded the challenges faced by the already stressed stainless steel industry, on which many other local industries depend on for equipment or related associated services to operate. The stainless steel value chain covers the manufacturing and wholesale sectors. In addition to primary stainless steel exports, South Africa exports between 25% and 35% of its stainless steel manufactured goods and components.

The industry was permitted to operate at 50% capacity under Level 4 of the national lockdown and at 100% capacity when the country moved to Level 3 on June 1. Sassda believes that the industry will return to prelockdown productivity levels, as there is demand from the markets serviced by the industry. There is also an increased interest in stainless steel amid the Covid-19 pandemic, owing to the metal's hygienic attributes.

However, even if the sector returns to prelockdown levels, its sustainability remains under threat. When comparing February 2019 with February 2020, the industry's exports were down 17%, production declined by 20% and imports were up 2%.

However, Sassda is optimistic that the industry could be on the brink of an S curve, or Sigmoid curve, so called because of its shape approximating that of the letter S. The curve has three general phases. A startup or initial phase, characterised by significant learning and adaption, but little apparent growth; an explosive growth phase; and a peak and decline.

Sassda hopes that the Covid-19 pandemic results in the industry adopting Fourth Industrial Revolution technologies sooner than expected.

Columbus Stainless, part of the Acerinox Group of companies, and the only primary stainless steel mill in Africa, spent more than R380-million on new capital projects and equipment upgrades at the Middelburg plant in 2019. Its latest project was the Lade metallurgy furnace upgrade, which improves the melt shop production process with significant cost savings, capacity increase and yield benefits.

Based in Mpumalanga, the company produces austenitic stainless steel, ferritic stainless steel and duplex stainless in plate, sheet, coil and strip.

OUTLOOK

With still many uncertainties regarding the impact of Covid-19 on economies worldwide, steel producers and analysts say it is difficult to accurately predict what the rest of 2020 holds. Global demand is expected to soften and steel prices are forecast to plummet.

Ratings agency Moody's Investor Service says the coronavirus outbreak exacerbates the already challenging operating environment for steelmakers globally. The broad macroeconomic weakness spreading in the wake of the pandemic is driving down demand for steel in core industries such as manufacturing, automotive and construction, as well as oil and gas exploration.

Steel major ArcelorMittal is hopeful that as countries start easing their lockdowns, economic conditions will improve. Construction and manufacturing – key markets for steel – are among the first sectors that many countries are allowing to restart operations.

World Steel Association chairperson of the economic committee Al Remeithi says the easing of restrictions that started in May should improve the outlook for the steel industry, but the recovery path will be slow.

However, Remeithi says the decline in steel demand in most countries will be less severe than during the global financial crisis in 2008, as the consumption- and service-related sectors, which have been affected the most, are less steel intensive. In many developed economies, steel demand was already at a low level, having still not fully recovered from the crisis in 2008.

Steel is expected to play an essential role in the revitalisation of the global economy.

Yet, despite steel customers restarting production, the steel market is still bound for a surplus this year. Fitch Solutions is forecasting a surplus of 12.60-million tonnes in 2020, compared with a deficit of 11.90-million tonnes in 2019. The surplus should narrow to 12.10-million tonnes and 4.70-million tonnes by 2021 and 2022 respectively.

In South Africa, the outlook is gloomy. Domestic steel prices, on an international parity basis, are poised for a significant fall, while domestic steel consumption is forecast to be below 3.30-million tonnes for 2020. This will be 26% less than the already-weak levels of 2019.

South African Iron and Steel Institute secretary-general Charles Dednam explains in a policy brief, published by research organisation Trade and Industrial Policy Strategy (Tips), that steel use will contract sharply, as a major part of the forward order book has been cancelled, as a result of Covid-19 mitigation measures.

Source: Bloomberg

Steel use is expected to contract sharply in South Africa, as a result of Covid-19 mitigation measures

The estimated steel capacity utilisation rate has fallen to 65%, and Dednam forecasts that domestic capacity use will drop to about 50% for long steel amid dwindling steel demand in the wake of poor business confidence levels.

"South African steel demand comes from a departure point of progressive weak demand, owing to a faltering economy. There was already insufficient demand to justify the fixed costs of the installed base of capability and jobs. Just as Covid-19 and the lockdown will reduce GDP, the demand for steel will fall even further and faster," he states.

Manufacturing companies integral to the supply chain of South Africa may not recover, which will have a longer-term impact on the competitiveness of some sectors. To protect the manufacturing industry, imports might have to be reviewed to prevent a flood of products into the market from countries that have eased lockdown measures earlier than South Africa and have excess stock that is dumped into the country.

As South Africa reopens its struggling economy following the Covid-19 lockdown, the industry will respond in different ways. While electric furnace operations could reopen fairly quickly, the restarting of blasts furnaces and liquid steelmaking have a longer response time and depends on demand. ArcelorMital South Africa has said that it will wait for demand to appear in its order book before recalling 100% of its workforce.

In the Tips document, Dednam states that some of the mini mills will require emergency funding on reopening. There will also be a need for consolidation of plants to ensure their sustainability. The halting of steel production has also had a significant impact on suppliers to the industry.

He has called for government support to help the steel industry weather the storm and has suggested that the upstream steel industry be given an exemption from the Competition Commission to work together to "save whatever is possible to save".

Overall, the Master Plan process – which is under way for the steel industry – will need to "be reshaped to ensure that it supports structural improvements for an industry that has been severely impacted by Covid-19".

Research consultancy Roskill steel alloys principal consultant Erik Sardain says the South African steel industry "suffers from structural problems" that existed before Covid-19. He argues that if tariffs and import duties are "off the table" as potential solutions because they make downstream products more expensive, a different direction would have to be taken to make the industry more competitive.

The Steel and Engineering Industries Federation of Southern Africa chief economist Dr Michael Ade says the South African steel industry will continue to struggle over the next two years, before showing mild signs of green shoots.

There is hope that the African Continental Free Trade Area agreement, which comes into effect in July 2020, will present opportunities for the South African steel sector.

Source: Bloomberg

Red-hot rolled steel coil being run through rollers

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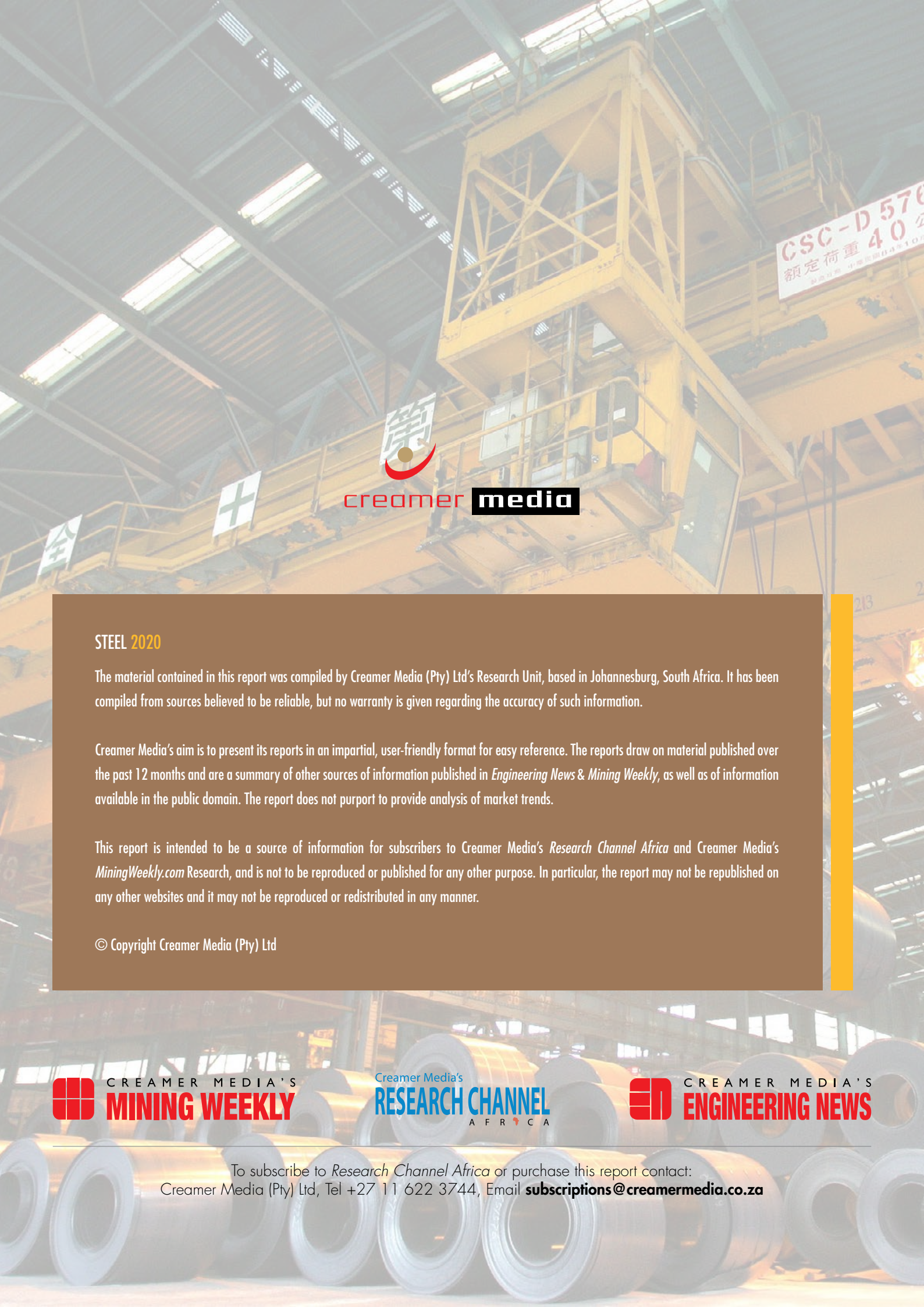

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