

stainless steel

the journal of the southern africa stainless steel development association



ISSUE 4 2024

2024 REFLECTIONS ON A MILESTONE YEAR

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Contact us

TELEPHONE NUMBER
011 883 0119

EMAIL
info@sassda.co.za

WEBSITE
www.sassda.co.za

Sassda

MICHEL BASSON
Executive Director
michel@sassda.co.za

CALLUM SUTHERLAND
Members & Communication
callum@sassda.co.za

MANKABE MORE
Education & Training
mankabe@sassda.co.za

TEBOGO NKWE
Market Intelligence & Lobbying
Tebogo@sassda.co.za

KIM STEVENS
Events, Email Marketing and Website
kstevens@sassda.co.za

JOSE HERON
Accounts
jose@sassda.co.za

LUISE ALLEMANN
Content, Social Media and
Stainless Steel Magazine
luise@mediaink.co.za

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Reflections on a Milestone year: A Look Back at 2024 and Beyond

As we wrap up the final edition of Stainless Steel Magazine for 2024, it's clear that this has been an extraordinary year for Sassda, the stainless steel industry, and South Africa as a whole. This is especially so for Sassda given that 2024 marked not only a year of significant activity but also the celebration of our 60th Anniversary and the triumphant return of the Stainless Steel Awards.



Against this backdrop, our usual initiatives were elevated to new heights this year. Record attendance at Sassda's educational and training events demonstrated the growing demand for knowledge and skills in the stainless steel sector. It is clear that as the world evolves, so do we, continuously enhancing our training programmes to address the challenges of the modern age.

Innovation and lobbying at the forefront

In terms of its technical prowess, Sassda has been at the forefront of driving awareness and understanding of laser welding technology via technical papers and the hosting of a well-attended laser welding industry workshop in October 2024. This game-changing advancement is increasingly being adopted by our members, transforming fabrication processes and delivering unmatched efficiency.

In the realm of networking and lobbying, Sassda has made significant strides in promoting the use of stainless steel at the highest levels. We've established new, high-level connections with government departments and state-owned enterprises (SOEs), highlighting how stainless steel can offer immense value in addressing critical national priorities. From improving water and food security to reducing life cycle costs for infrastructure development; stainless steel's potential is vast.

Expanding markets through sustainable solutions

Sassda, alongside its extensive network of industry partners and peer organisations, remains committed to developing new markets. By focusing on localisation and sustainable alternatives, we continue to demonstrate how stainless steel can reduce environmental impact and offer lower life cycle costs compared to traditional materials like carbon steel - and, in some cases, even wood.

Balancing hard work with camaraderie, Sassda also partnered with the Southern African Institute of Welding (SAIW) to host four highly successful regional golf days. These events not only fostered connections across the industry but also provided a welcome opportunity to recharge and celebrate our shared achievements.

Data driven

I'm also proud to say, that a data-driven approach underpins much of what we do. Monthly statistics on local stainless steel consumption in 2024 reveal a promising upward trend, signalling potential growth for certain sectors. This progress can be attributed to several factors, including increased political stability following local elections, uninterrupted electricity supply, declining inflation and interest rates, and global improvements, such as South Africa's progress in exiting the grey list for international investment.

Although growth in 2024 is emerging from a low base after the challenges of 2023, there is a tangible sense of optimism. The outlook for the stainless steel industry

appears brighter than ever, with positive momentum carrying us into the future.

Valuable collaboration

It's also clear that engagement with industry platforms and associations has never been more critical. Sassda has witnessed a surge in membership interest, reflecting the value of collaboration within the broader steel industry. As a representative of a specialised segment of the sector, we strive to provide our members with maximum value.

By connecting them with the larger manufacturing ecosystem, we offer insights into synergies and opportunities that extend beyond the stainless steel segment.

Our commitment to knowledge-sharing ensures our members are informed about trends, innovations, and capabilities that can drive their success.

Looking ahead

As we close this chapter on 2024, the Sassda team and I extend our heartfelt gratitude for your steadfast support throughout the year. Together, we've navigated challenges, celebrated milestones, and laid the groundwork for a future defined by growth and innovation.

We wish you a peaceful and restful holiday season, and we look forward to welcoming you back in 2025. Let's continue to champion a material that is, and always will be, Simply Brilliant!

Michel Basson, Sassda Executive Director

IMPORTER AND DISTRIBUTOR OF HIGH QUALITY STAINLESS STEEL FASTENERS

The Fastenright Team wants to take this opportunity to express our sincere gratitude for your continuous support throughout the year!

Your loyalty and trust are the corner stone of our success, and we truly appreciate it.

We wish you and your families a wonderful Christmas, a very happy and safe holiday and a prosperous 2025!

We look forward to working together with you again next year!

Yours sincerely,
FASTENRIGHT TEAM

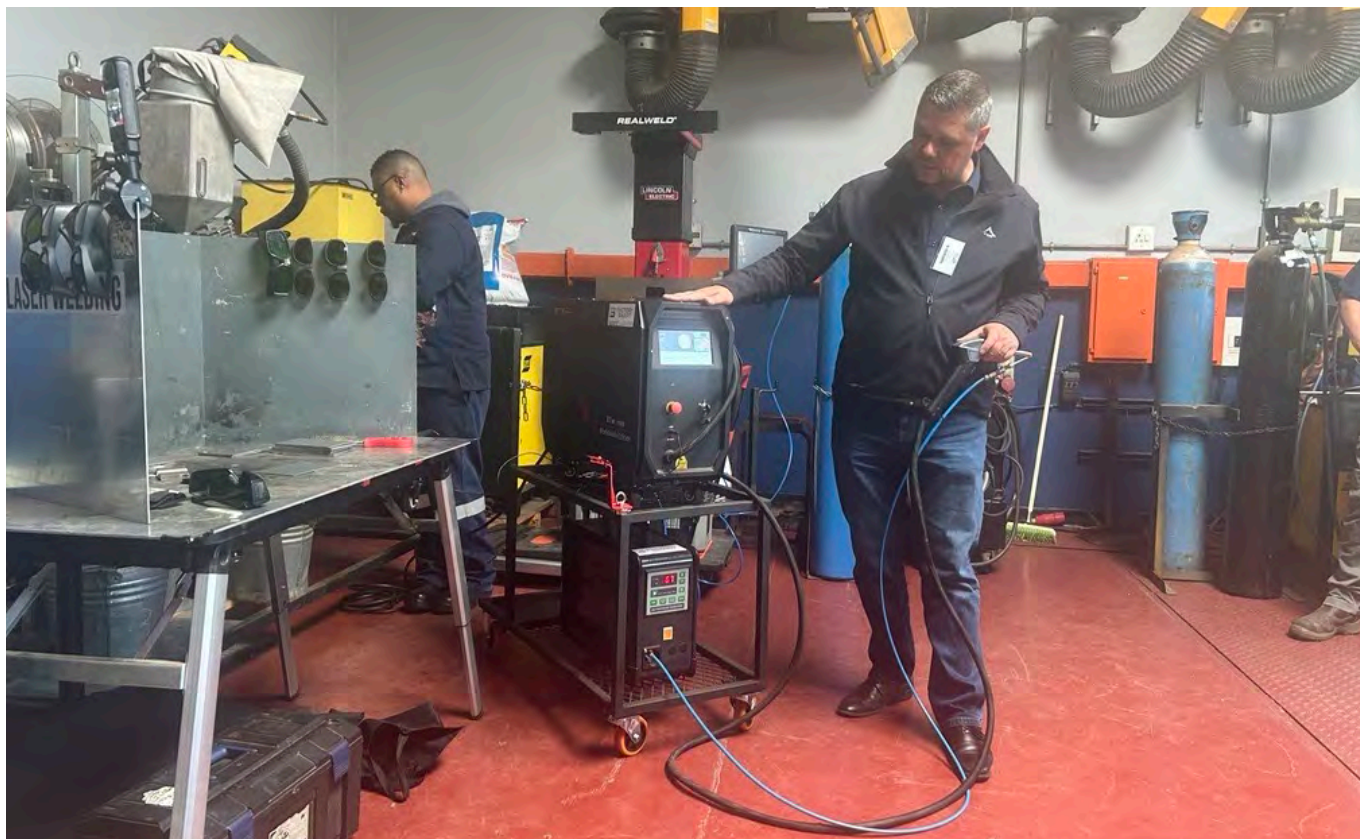


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Sassda Laser Welding Workshop Heralds a New Era



Sassda hosted an enlightening Laser Welding Workshop at the Southern African Institute of Welding (SAIW) Campus in Johannesburg in October 2024. The event brought together experts, industry professionals, and welding enthusiasts to explore the cutting-edge advancements in laser welding technology. Through insightful presentations and hands-on demonstrations, the workshop highlighted how laser welding is set to revolutionise industries ranging from manufacturing to aerospace.

Remarkable strides

Laser welding, though a relatively recent development, has made remarkable strides since its inception in 1960. Rob Lawrence, one of the key speakers at the workshop,

emphasised how quickly this technology has evolved. He stated, “Laser welding technology was only invented in 1966, making it relatively new. Over time, the technology has continued to improve. Torches are becoming smaller, machines are getting lighter, and the initial water-cooled heavy systems have evolved”.

From its initial applications using ruby lasers to today’s advanced systems, laser welding has come a long way. Lawrence highlighted futuristic advancements, such as a flexible torch head, which would provide more flexibility in welding applications. This continuous evolution makes laser welding not just a current industry trend but a technology that promises long-term growth and innovation.

Lawrence also emphasised the potential business opportunities laser welding presents for South African industries. This against the backdrop of significant growth projected for the global laser market. “The laser cleaning market alone was valued at \$685 million in 2022, with rapid expansion expected. As laser welding becomes more widespread, it will revolutionise various sectors, offering a chance for South African businesses to stay competitive in the global market,” stated Lawrence.

Numerous benefits

One of the major topics discussed at the workshop was the numerous benefits laser welding offers over traditional welding methods. Factory Smart's **John Owen Welgemoed**, underscored the efficiency of laser welding, explaining, "With laser welding, you can work two to three times faster than conventional methods, depending on the material. It produces neat, precise welds with very small heat-affected zones, especially on stainless steel. This significantly reduces distortion and resolves many manufacturing challenges".

Welgemoed shared examples from his own experience, including a customer in Paarl who had drastically reduced production times. "A job that previously took him eight hours to complete with traditional welding, now takes just two hours using laser welding.

"This improvement has opened doors for more work, new projects, and even the possibility of exporting. By speeding up production times and minimising finishing work, businesses can save costs on labour and materials, making laser welding a more efficient and economical choice," he explained.

Overall, one of the key takeaways from the workshop was the potential for laser welding to reduce labour costs and increase production efficiency. Welgemoed remarked, "Laser welding will drastically improve production efficiency and reduce labour costs. The future of manufacturing will be shaped by this technology. By adopting laser welding, businesses can expect to increase

their output and reduce waste, while also contributing to the overall industrial growth of the country.

Versatility across industries

Laser welding's versatility was another highlight of the workshop. Whether it's used for cutting-edge aerospace components or intricate jewellery making, this technology is applicable across numerous industries. One particularly compelling demonstration at the event showcased the ability of laser welders to work with tricky materials like aluminium and stainless steel, delivering high-quality results.

Welgemoed gave an example of aluminium welding, stating, "This material can be tricky no matter the method, but with a laser welder, it's easier. You simply place the torch, and the wire pushes the weld along smoothly. With a 1.5-kilowatt laser, you can achieve three to four millimetres of penetration".

Laser welding's applications go beyond basic metal joining. The technology is being used for laser cleaning, laser bending, and even laser dentistry, showcasing its incredible range. Lawrence pointed out that industries like aerospace and food processing are set to benefit greatly from these advancements.

The need for training and certification

As laser welding technology continues to advance, the importance of proper training and certification cannot be overstated. SAIW Practical Training Manager **Confidence Lekoane**, announced that the institute will be introducing a laser welding courses starting in 2025 to meet the rising demand for skilled laser welders.

"Our new course will provide an introduction to laser welding, covering the fundamentals of the process, the equipment used, and essential safety precautions. Participants will learn about quality control, how to eliminate and prevent defects, and get hands-on training".

She added that given the precision and high-energy output of laser welding equipment, safety protocols are a top priority. Factories using laser systems must have specialised safety zones, and operators need to be well-trained to prevent accidents. "For instance, improper handling of a laser cleaning system could result in unintended damage to the surrounding area, making education a crucial component of laser technology adoption".

The Laser Welding Workshop hosted by Sassda at the SAIW Campus was a resounding success, providing participants with valuable insights into the future of laser welding technology. As Lawrence, Welgemoed, and Lekoane all emphasised, laser welding is not only more efficient and versatile than traditional methods but also easier to learn and implement. This makes it an attractive option for industries looking to modernise their production processes and remain competitive.



SARS and Stainless Steel Industry Strengthen Ties in Successful Training Session

In a groundbreaking step towards enhancing collaboration between the stainless steel industry and the South African Revenue Service (SARS), Sassda has participated in a highly successful Metals Specialist Factory training session hosted by the South African Iron and Steel Institute (SAISI). The event, held at the IST offices in Pretoria West, aimed at addressing technical and operational challenges that industries face when dealing with SARS.

This exclusive training session, approved by SARS and the SARS Institute of Learning (SIOL), brought together industry representatives and SARS officials to highlight critical issues through the presentation of real-world case studies. The focus was on resolving problems within the scope of each participant's expertise, covering concerns such as imports, duties, testing, and documentation procedures.

Industry and Sars collaboration on display

The session offered a platform for Sassda members to present their challenges directly to SARS officials. The goal was to offer practical insights that could be applied in the field to improve daily operations and compliance.

During the session, Sassda members outlined various difficulties they had encountered in their dealings with SARS, ranging from delays in import clearances to issues around duty classifications. While immediate solutions were not expected, the discussions marked a crucial step in bringing these issues to the forefront for action by SARS.

A positive step forward for the stainless-steel industry

Sassda Market Intelligence Specialist **Tebogo Nkwe** emphasised the significance of this event for the stainless steel industry. Speaking after the session, she commented, "This training session has provided an invaluable platform for our members to address some of the pressing issues with SARS. By presenting actual case studies and engaging



directly with the SARS team, we are confident that these discussions will lead to long-term improvements. Our members are committed to contributing constructively to help SARS implement practical solutions that will benefit both sides."

Nkwe's statement reflects the optimism shared by many attendees, who see this collaboration as a pivotal moment in refining the processes governing importation, customs duties, and other compliance-related matters.

Next steps

The feedback from Sassda members and SARS officials alike was overwhelmingly positive, with both sides acknowledging the need for continued engagement. As part of the ongoing effort, SARS officials have committed to reviewing the issues raised and incorporating the insights shared during the session into their operational framework.

Nkwe added, "The stainless-steel industry plays a vital role in our economy, and having this level of engagement with SARS is a major step forward. We look forward to working closely with SARS in the future to ensure smoother processes and a more efficient working relationship."

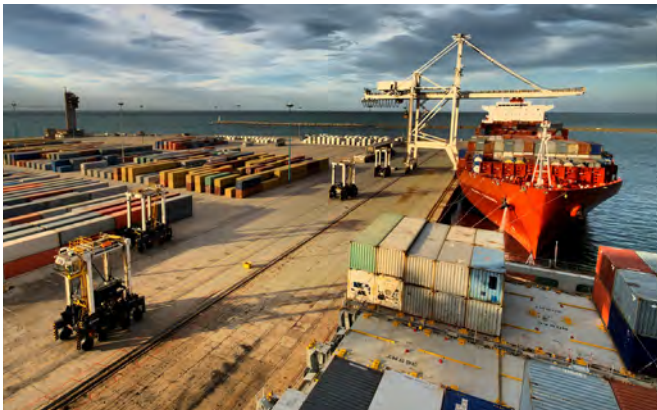
For further details or inquiries, please contact Tebogo@sassda.co.za or call (011) 883-0119

The best of the GPS e-newsletter

Each month Sassda rounds up a selection of global and local market intelligence articles that are sent to our members in an easy-to-read package of content. They're designed to highlight pockets of potential growth in demand for stainless steel. Here are some of the best articles from the last few issues...

New Scaw steel mill to replace R4bn imports

Scaw Metals has invested R5-billion in the development of a new steel mill in Johannesburg, positioning the company to replace hundreds of thousands of tonnes of steel imports with locally manufactured products. The local manufacturer of long steel products, which competes with ArcelorMittal South Africa (Amsa) and many mini-mills and micro mills across the country, is likely to replace some R4bn worth of products that are currently imported...[Read more](#)



ArcelorMittal SA turns down Network Investments' R19-Billion bid

A R19-billion transformation bid for ArcelorMittal South Africa (Amsa) by local firm Network Investments has been rejected, despite promises to revolutionise the country's struggling steel industry with green technology and more profitable stainless steel production...[Read more](#)



Indian stainless steel giant in trouble again?

Indian stainless steel group Jindal seems to be thinking aloud about ending its stainless steel production in Indonesia after recent business figures that fell well short of expectations. And scrap demand in Taiwan is up more than 34% month-on-month in September...[Read more](#)

City of Cape Town sets conditions for rail takeover

Cape Town Mayor Geordin Hill-Lewis says national government will have to transfer the required budget, estimated to amount to R123-Billion over a 30-year period, for the City to take over passenger rail services. According to the City's Rail Feasibility Study, which proposes ownership models that it hopes to serve before Council for approval in order to take further steps, the passenger rail services would be more efficient and fully functional under the municipality...[Read more](#)





Businesses pledge over R76 billion to boost KZN economy

Sixteen major KwaZulu-Natal businesses made pledges of over R76 billion over the next two years at the 2024 Trade and Investment Conference in Durban. The event included keynote addresses by KZN Premier **Thami Ntuli**, Minister of Trade, Industry and Competition (DTIC) **Parks Tau**, and Edtea MEC **Rev Musa Zondi**, who welcomed the pledges but also called for further investment during the conference to unlock KZN's economic growth on a global stage...[Read more](#)

ArcelorMittal SA faces tough times ahead as imported steel weighs down operations

A recent Business Report article says that optimism is waning for South Africa's steel industry, with ArcelorMittal South Africa (AMSA) identifying the influx of cheap imports, high costs for energy and logistics and weak demand as contributing to this against the backdrop of fresh uncertainty for its long business that has continued to operate at a loss....[Read more](#)

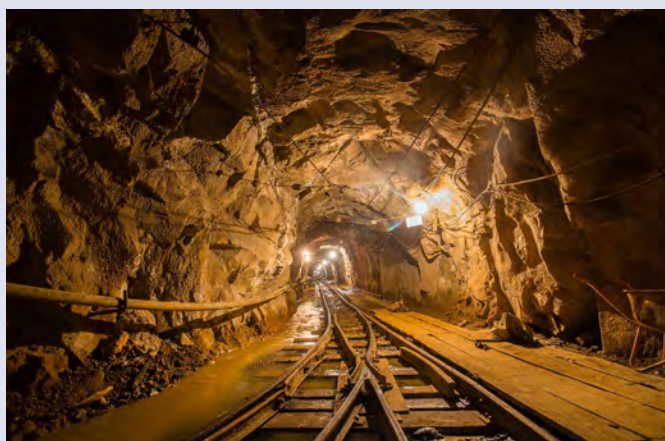


Govt committed to enhancing rail and freight, Ramaphosa tells auto sector

President **Cyril Ramaphosa** has reaffirmed the government's commitment to improving South Africa's rail and freight sectors during his keynote address at the SA Auto Week opening in Cape Town. His remarks come amid Transnet's ongoing efforts to revitalise the Port of Durban and a R7.5-Billion project aimed at upgrading rail infrastructure between Gauteng and the Eastern Cape, a move designed to boost the automotive and component manufacturing industries...[Read more](#)

Dark clouds gather over some of South Africa's biggest employers

South African mining companies, particularly those producing platinum group metals, diamonds, and coal, are facing immense financial pressure as commodity prices remain weak and the operating environment is difficult. Once the backbone of the local economy, South Africa's mining industry has been steadily weakened by volatile labour relations, organised crime, and regulatory uncertainty. Despite declining output, the sector is still vital to the economy, employing over 477 000 South Africans and paying billions of rands in tax each year... [Read more](#)



Steel industry vital for SA's industrialisation, Majola says

Trade, Industry and Competition Deputy Minister **Fikile Majola** has stressed the impact of the local steel industry and its importance to South Africa's industrialisation, and the challenges that the sector is facing from local and global pressures, emphasising the need to build an "inclusive sector" that contributes to the economy...[Read more](#)



PPC opens new highveld blending plant to secure cement supply

PPC has officially inaugurated its new blending plant. The facility, located in the Highveld Steel Industrial Park in Emalahleni, demonstrates PPC's ongoing commitment to improving efficiencies, reducing turnaround times, and delivering exceptional quality and customer service to all stakeholders in the built environment sector of the Highveld region....[Read more](#)



South Africa to form company to expand bulk water infrastructure

President Cyril Ramaphosa has approved a law to set up a new agency that will develop and manage the country's water infrastructure and attract financing for new projects. The law establishes the "National Water Resources Infrastructure Agency SOC," to "enable South Africa to expand bulk water infrastructure and improve the management of existing water assets to ensure water security over the next decade," the presidency said in a statement....[Read more](#)

SA manufacturing sector needs to find 'glocalisation' opportunities

As consumer behaviour and preferences change in the wake of sustainable options, coupled with incoming decarbonised goods trade regimes, it is worth considering more "glocalisation" opportunities for the South African manufacturing sector. This was the consensus reached by a panel on globalisation and localisation during the second day of the 2023 Manufacturing Indaba held on 25th October...

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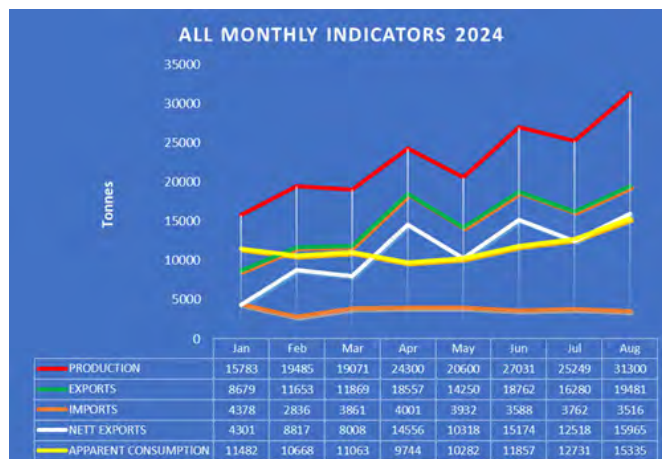
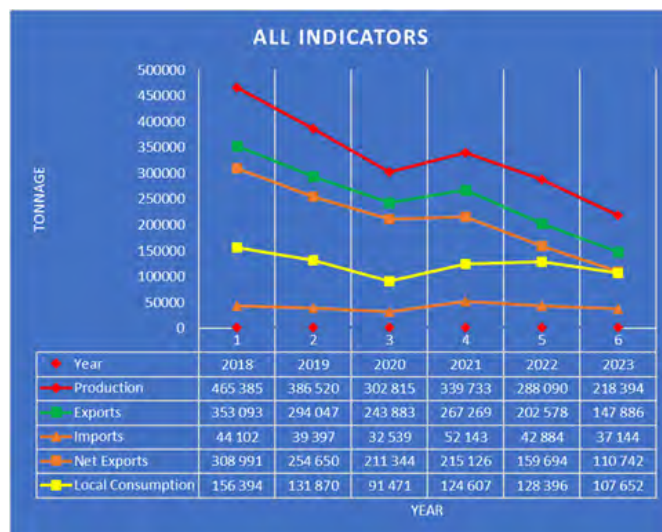
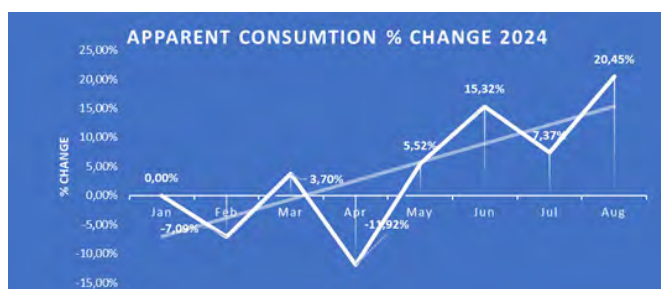
Two Sides to the Stainless Steel Coin in 2024

2024 has been a year of contrasts for South Africa's stainless steel sector with macroeconomic improvements like stable electricity and a stronger Rand tempered by sector-specific challenges. Despite these challenges Sassda Executive Director **Michel Basson** says the Association remains steadfast in its commitment to driving innovation and local growth...

1. How would you categorise 2024 for the South African stainless steel sector and what have been the key achievements and most pressing challenges?

There are two sides to the coin when reflecting on 2024. The year began with trepidation, mainly due to uncertainty surrounding electricity supply and the national elections. However, as the year progressed, uninterrupted electricity became a lasting reality. Additionally, the Rand strengthened after an election that demonstrated mature political behaviour, coupled with lower inflation and interest rates.

Despite these positive macroeconomic indicators, the stainless steel sector has not experienced a corresponding increase in activity. Apparent consumption of stainless steel contracted by 16% during 2023, as illustrated on the graph on the right, bringing an end to the growth phase that began in 2021.



However, it is not all doom and gloom, as monthly indicators for 2024 suggest renewed activity in the local stainless steel sector.

For Sassda, the focus remains on growing local stainless steel consumption. Encouragingly, there are signs that local consumption may grow during 2024, potentially at a rate exceeding national GDP growth. While this would be a noteworthy achievement, it is unlikely to elevate the industry to a position significantly better than in 2018.

As has been emphasised before, the South African stainless steel industry is resilient and remains optimistic about the future, albeit with slow progress. Growth opportunities exist in renewable energy, electrical transmission, general infrastructure, and agriculture - sectors often highlighted in economic discussions. For now, we must take the bitter with the sweet, echoing Jan Smuts's observation from 75 years ago: "Still, the worst, like the best, never happens in South Africa."

2. Please outline Sassda's discussions with the Department of Small Business Development Department to boost local sourcing of stainless steel cutlery and holloware?

The majority of Sassda members are small and medium enterprises (SMEs), making SME growth a critical priority. Beyond serving members, SMEs represent a vital part of the stainless steel value chain, as this is where most jobs are created, and value is added.

Sassda has taken certain initiatives to a national level through its participation in the Steel Master Plan. To achieve tangible results, we have now engaged with the Department of Small Business Development (DSBD). Discussions with senior officials in the department revealed a shared vision for supply and value chain development, with initiatives and products available to support some of our members.



One of these initiatives involves revitalising the South African hollowware and cutlery industry. Historically, this labour-intensive sector supplied over 80% of the local demand for these items. There is now an opportunity to localise or reclaim more than 10 000 tons of related finished stainless steel goods currently being imported annually.

Sassda, together with industry partners under the Steel Master Plan, has facilitated collaboration between a prominent local retailer and a fabricator in rural Eastern Cape. This partnership is yielding tangible results, with orders now being placed.

Given that production volumes are crucial for cost competitiveness in this sector, Sassda believes that collaboration with the DSBD will encourage more retailers to support local production. This effort will also increase government procurement of local products through departments such as Health, Defence, and Correctional Services.

3. Which specific roles or projects has Sassda taken on to encourage retailers to prioritise locally produced stainless steel products?

Sassda does not offer direct incentives to retailers to encourage local product purchases. Instead, it appeals to the patriotism and long-term vision of South African retailers, urging them to invest in real growth for the local industry. The argument is simple: by investing in local procurement, retailers contribute to skills development and job creation





while supporting the South African communities that sustain their businesses through daily purchases.

Collaboration with the DSBD offers additional opportunities for smaller manufacturers. For example, the DSBD continues to offer powerful cluster development programmes that have been highly effective in advancing stainless steel industry sectors in the past.

These partnerships can help smaller entities access larger markets, enabling sustainable growth.

4. What are some key strategic initiatives Sassda has pursued recently and how are they shaping the South Africa's stainless steel industry?

Sassda's strategy, as outlined in the Steel Master Plan, remains focused on developing local demand as a foundation for eventual export-driven growth. This strategy emphasises two primary objectives:

- **Increasing Local Tonnage Usage:** Stimulating the bulk use of stainless steel in infrastructure projects such as electrical transmission, renewable energy, water supply, and rural bridges. Progress here depends on government rollout schedules.
- **Job Creation Initiatives:** Projects like the hollowware initiative aim to localise beer keg production, among

others. Collectively, these initiatives have the potential to create over 30,000 sustainable jobs—a critical focus in the current socio-economic environment.

Sassda is also exploring opportunities to replace traditional materials like wood and galvanised steel with alternatives such as 3CR12. In 2025, Sassda plans to actively promote 3CR12 as a cost-effective substitute for applications like roofing, cladding, storage, and lightweight construction.

5. What do you see as the biggest threats facing South Africa's stainless steel industry today?

The performance of the South African stainless steel industry is closely tied to the broader national and global economies. While the sector performs reasonably well under challenging circumstances, it is far from reaching full capacity.

Potential threats include sub-standard imports, dumping, and exchange rate fluctuations. However, the greatest danger lies in complacency. After years of lateral growth, there is a risk of accepting the status quo and neglecting opportunities for innovation and adaptation.

For example, technological advancements such as laser welding and the broader applications of stainless steel are often underutilised. A lack of knowledge and unwillingness to adapt to change can hinder progress.

To counter these threats, the industry must cultivate passion, innovation, and a deeper understanding of the material to thrive in this challenging environment.

6. Where do you see the greatest opportunities for innovation and growth in the local stainless steel industry?

Opportunities in the stainless steel industry often emerge through innovative problem-solving and a comprehensive understanding of the material's diverse properties. With over 200 stainless steel grades developed for specific applications, the potential for innovation is immense. While stainless steel is widely regarded as a solution for corrosion issues, its physical and mechanical properties offer much more. For example:

- Some grades are magnetic, while others are not.
- Certain grades work-harden, while others do not.
- Some grades offer excellent thermal conductivity, while others do not.

True opportunities arise when these properties are creatively applied to solve real-world challenges. Sassda fosters a culture of innovation by promoting knowledge, encouraging problem-solving, and supporting projects that demonstrate stainless steel's versatility. By leveraging the material's potential, the industry can achieve greater efficiency and long term sustainability.



Philan Pillay (NDE Sales Rep) alongside the impellers made from Sanicro® 35.

NDE Scored First Order in SA of Exciting New Stainless Steel Alloy

NDE Durban became the first (and to date, only) stainless steel stockist in SA to place an order of Sanicro® 35 for the SA market.

In another South African first for the company, Sanicro® 35¹ was ordered for application in a Durban-based factory in March 2024. This grade is one of the world's newest stainless steel alloys.

This follows on from NDE's innovative success with Lean Duplex (LDX 2101) stainless steels which were introduced into South Africa in the early 2000's by NDE.

"A new alloy is always an exciting development in the world of corrosion resistant stainless steel because of the new solutions and benefits for customers. We are proud to have been the first in South Africa with Sanicro® 35"

Hardy Esterhuizen, Managing Director of NDE.

To date, NDE is the only company in South African who have placed an order for Sanicro® 35.

"Our technical expertise in appropriate material selection for specific applications brought this exciting new

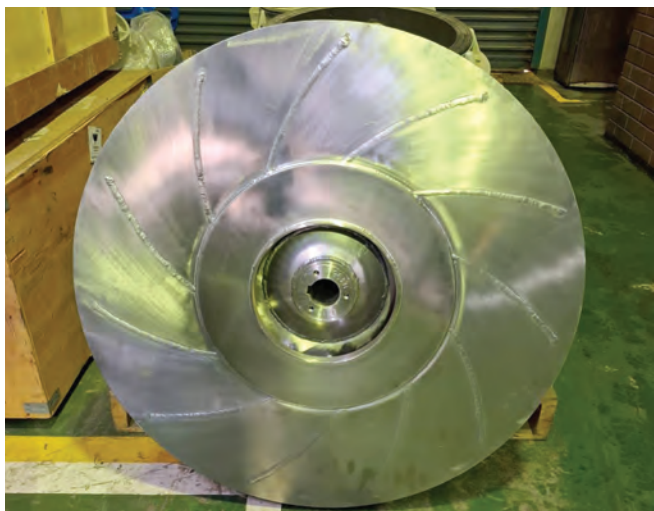
alloy into South Africa as a solution for a customer with a complex corrosion problem," says Antonie Davis, Durban Branch Manager.

"The new alloy provides excellent properties for many harsh environments at a market-related, stable price," he says.

Sanicro® 35 for long life in harsh corrosive environments:

- Excellent resistance to pitting and crevice corrosion
- Excellent resistance to stress corrosion cracking (SCC)
- High resistance to uniform corrosion in acid and caustic environments
- High resistance to erosion-corrosion
- Very high mechanical strength
- Good weldability using nickel-based alloy consumables
- Good fabricability, i.e. machining and forming
- Competitive and stable price
- Bridging the gap between austenitic and high nickel alloys

A competitive and stable price is another big advantage of the new material. Comprising 35% nickel and 6.4% molybdenum versus the 58% nickel and 9% molybdenum of Inconel 625, Sanicro® 35 reduces exposure to market volatility in these metals.



Impellers created from Sanicro® 35 plate. These have performed beyond expectation and have been corrosion resistant to high levels of sulphur.



'In addition, the high mechanical strength often allows for thinner plate to be used in equipment design, further reducing costs,' says Antonie Davis.

Developed to fill the gap between austenitic and high nickel alloys, **Sanicro® 35 is a competitive alternative to nickel-based alloys** such as Inconel 625 and others, for corrosion resistance in demanding industrial environments.

'Our customer needed a solution for large impellers in a very corrosive environment where lifespan was limited by corrosion and the cost of replacement was significant,' says Philan Pillay, the Sales Representative who pioneered the new solution with NDE's technical team.

Basil Goldswain, consulting Engineer on NDE's technical team, assisted in a variety of assessments of the new alloy, also supplying samples to the customer for their own in-house testing.

'We highlighted the Pitting Resistance Equivalent (PRE) of Sanicro® 35 at a beneficial 52, whereas in comparison, 904L has a PRE of 35. While Inconel 625 has a similar PRE (51) to Sanicro® 35, Inconel 625 is more expensive due to higher nickel and molybdenum content,' says Basil.

"Sanicro® 35 is a material of the future. We expect it to take a big share of the current market for Alloy 625," says Marie Louise Falkland, senior Technical Manager at Outokumpu who are producing the new alloy under license from Alleima (previously Sandvik).

NDE is accepting orders for hot rolled plate up to 50mm thick as well as cold rolled sheet 0.4-5.5 mm thick. Before placing the order, NDE will do the necessary technical assessment of your corrosion problem with you to ensure that this is the appropriate material and meets the criteria of your application, including but not limited to:

- Life span
- Operating conditions
- Standard Operating Procedures
- Testing

Where required, NDE supplies corrosion coupons for corrosion testing and, if necessary, can organise laboratory testing.

"Our research into the special properties of Sanicro® 35 over the past year or two has highlighted a number of typical applications and environments where it could provide significant benefits," says Basil Goldswain.

Call NDE and chat to one of our experienced sales team who can assist with your query and escalate where necessary to our Technical Team to discuss Sanicro® 35 if you are experiencing corrosion related problems in any of the following areas, or you would like us to help you find the appropriate stainless steel alloy for your particular conditions:

- Tube plate & shell of tubular heat exchangers
- Scrubbers
- Flue gas cleaning
- Carbon capture
- Sea water
- Brine
- Chlorinated acids
- Chlorinated hydrocarbons
- Chemical
- Petrochemical
- Refinery industry
- Inorganic acids
- Organic acids
- Fine chemicals
- Oil & gas equipment
- Biorefining
- Geothermal

Sanicro® 35 sheet and plate are both covered by the ASTM B625 and ASME code Case 2982, Boiler and Pressure Vessel Code, Section VIII, Division I and II.

Sanicro® 35 is a trademark owned by Alleima AB and produced as plate and sheet by Outokumpu under a license agreement.



CORROSION RESISTANT MATERIALS AND SOLUTIONS



Elevate Your World

Stainless Steel - Universal Element in our Lives!

We inhabit a world
that thrives on the strength
and versatility of **stainless steel**

This is thanks to the **ongoing contributions** made by
everyone in the **stainless steel industry**.

Thank you for your support in 2024.

Together, we continue to grow South Africa's economy.

We continue to strive for **excellence, innovation and service**.

Looking forward to a prosperous and productive 2025!

Celebrating Female Leaders Shaping our Industry

Sassda recently posted a series of in-depth interviews with the female leaders shaping our industry on our social media channels. To showcase the depth of their knowledge and insight here are their individual profiles...

Breaking Barriers: Nocwaka Ntshangase's Journey to Senior Sales Leadership

Nocwaka (Nocs) Ntshangase, Local Sales Manager at Columbus Stainless, is a trailblazer whose career bridges metallurgy and technical sales. Starting as a metallurgist, she transitioned to sales, discovering that this field required deep technical expertise. Embracing the challenge, Nocwaka excelled, rising to oversee operations across Southern Africa.

A commitment to lifelong learning

Recognising the competitive nature of her industry, Nocwaka took the initiative to upskill beyond her diploma. She enrolled in a training program to gain essential technical knowledge and pursued management development programs to refine her leadership capabilities. Her proactive approach highlighted her belief that success requires both technical expertise and people management skills.

"I've always known that no one is going to hand me success. I had to work harder, prove myself more, and position myself to be ready for any opportunity." Nocwaka Ntshangase

Overcoming challenges

As a black woman in a predominantly male, Afrikaans speaking industry, Nocwaka faced cultural and gender related barriers. These challenges often left her feeling isolated but also fuelled her determination. She focused on building relationships and proving her value in an environment that wasn't always welcoming to women. "I've always known that no one is going to hand me success. I had to work harder, prove myself more, and position myself to be ready for any opportunity," she reflects.

Advocating for equity

Nocwaka takes pride in the growing number of women in leadership at Columbus Stainless, a testament to hard work and merit. While acknowledging the importance of employment equity initiatives, she envisions a future where individuals are recognised solely for their contributions.



Mentorship has been instrumental in her journey, particularly from former Columbus CEO Dave Martin, who guided her through professional challenges and personal growth. His mentorship helped shape her leadership style, which balances resilience with empathy.

Balancing career and family

As a mother, Nocwaka is committed to excelling in her career while being an engaged parent. She ensures her children see her not just as a provider but as a present and supportive figure in their lives. This balance inspires her to strive for excellence in all areas, setting an example for her daughter and future generations.

Inspiring the next generation

Throughout her career, Nocwaka has broken barriers and created opportunities for others. She remains optimistic about the increasing number of women excelling in her industry and believes that hard work and perseverance can overcome systemic obstacles.

"Being a Black woman in a male-dominated industry comes with its challenges, but it also brings a sense of pride in breaking barriers and creating a path for those who follow," she says.

Nocwaka's journey is one of resilience, empowerment, and a commitment to fostering equity in her industry. As she leads and mentors others, she continues to advocate for a workplace where contributions, not background, define success.

A journey inspired by curiosity

SAIW Practical Training Manager **Confidence Lekoane** is breaking barriers in welding and metallurgy, inspiring change, empowering women and championing diversity in a male-dominated industry...

Confidence's passion for metallurgy was sparked by a mesmerising image of molten metal being poured - a moment that ignited her curiosity about the field. This fascination grew into a fulfilling career, as she sought to deepen her understanding of metallurgy and excel in the challenges it presented. "That image really attracted me to find out more about what metallurgy is all about," she reflects.

Lifelong learning and growth

A firm believer in continuous learning, Confidence actively pursues courses and workshops to stay updated on the latest industry advancements, from cutting-edge technologies to evolving materials and methodologies. "I've attended a lot of courses that align with my career," she notes, underscoring the importance of staying current in a fast-paced industry.

Networking has also been crucial in her development. By attending conferences, webinars, and industry events, she has built connections that foster knowledge-sharing and professional growth.

"The biggest challenge is being heard and being taken seriously, but with confidence and expertise, these barriers can be overcome."

Confidence Lekoane

Championing diversity and inclusion

Confidence has been a driving force for inclusivity in welding, advocating for women in a traditionally male-dominated field. At the SAIW, she has worked to develop policies that encourage more women to join the industry. "When I started, I was often the only woman in a training course. Now, I see an average of three to five females per course, which is a significant improvement."

While progress has been made, challenges persist. Gender bias remains an issue, with some clients hesitant to trust her expertise. Yet, through perseverance and a proven track record, she has earned their respect. "The biggest challenge is being heard and being taken seriously," she admits. But with confidence and expertise, these barriers are surmountable.

Balancing professional and personal life

As a mother, wife, and professional, Confidence balances a demanding career with family responsibilities. "The welding field often requires long hours to meet project



deadlines, and balancing that with family life can be challenging," she explains. With determination and support from mentors, she has honed leadership skills that help her manage these competing demands.

Mentorship and leadership

Mentors have played a vital role in Confidence's career, shaping her leadership style and encouraging her to push beyond her comfort zone. These lessons in effective communication, conflict resolution, and decision-making have inspired her to mentor others, especially women entering the field.

"Anything a man can do; we can also do. Nothing is beyond us," she affirms, encouraging women to seize opportunities and excel in leadership roles.

A vision for the future

Confidence envisions a more inclusive future for the welding industry, with greater opportunities for women. She continues to advocate for diversity and encourages women to step into leadership roles. "It's a tough industry, but women are capable of multitasking and excelling. Don't give up - get involved and make your mark."

In a male-dominated industry, Confidence Lekoane inspires others to challenge norms, break barriers, and pursue their ambitions with determination.

Fiona Jacobs: From Stainless Steel Pioneer to Industry Leader



“Passion and resilience can break any barrier -mentorship and integrity pave the way for lasting impact.” Fiona Jacobs

EMVAfrica's Director of Procurement, International Trade, and Business Development **Fiona Jacobs**, has built a remarkable career over three decades in the stainless steel industry. Her path is one of adaptability, mentorship, and resilience, breaking boundaries in a male-dominated field and inspiring a new generation of leaders.

Embracing a new career

Fiona's entry into the stainless steel industry was unplanned. She initially trained as a chef but pivoted careers to balance work with family commitments. Joining EMVAfrica with no prior industry experience, she embraced on-the-job learning, mastering procurement, supply chain management, and international trade. Her determination and ability to adapt propelled her into leadership, proving that passion and a willingness to grow are critical to success.

There were no formal mentorship programs then. I had to learn as I went along,” Fiona recalls. Her commitment

to continuous learning was key to her rise within the organisation.

Mentorship and Integrity

Mentorship played a pivotal role in Fiona's career. Two key mentors at EMVAfrica Hugh Witty and Ken Perel instilled in her the value of integrity, which remains central to her leadership philosophy. “Integrity was everything,” she says, recalling moments where ethical decisions shaped her professional approach.

Now, Fiona mentors others, guiding both men and women in the stainless steel industry. While she celebrates progress, she acknowledges persistent gender bias, sharing her experiences of being overlooked in meetings where male colleagues were assumed to hold senior positions.

An evolving workplace culture

Fiona is encouraged by the increasing presence of women in leadership and engineering roles, particularly dynamic black female engineers driving innovation in the field. “It's wonderful to see and work with these women,” she says, celebrating the creativity they bring to the industry.

She also notes a significant cultural shift toward work-life balance, contrasting sharply with her early career days when prioritizing family was rare. “It's refreshing to see colleagues prioritising their families now,” she says, adding that balancing professional demands with personal responsibilities has been a cornerstone of her own journey.

Collaborative leadership

Fiona's leadership style emphasises inclusivity and collaboration. “You don't know everything. Listening to your team brings the best ideas,” she explains. At EMVAfrica, she has fostered a culture of openness, encouraging employees across departments to share their perspectives. This approach has strengthened the company's operations and enhanced its reputation as an industry leader.

Building a legacy

Fiona is focused on empowering the next generation of leaders in the stainless steel industry. She advises employees to actively seek out training and development opportunities, saying, “You have to put yourself forward.” Her legacy is one of mentorship, passion, and inclusivity. Fiona's journey showcases the power of adaptability, integrity, and collaboration to break barriers and shape the industry's future. Her story is not just about excelling in stainless steel but about resilience and transforming the workplace into a more equitable and innovative space for all.

Tholwana Mogowane: Leadership, Advocacy & Growth in the Stainless Steel Industry

NSSC Director **Tholwana Mogowane** embodies resilience, adaptability, and a commitment to fostering growth in the stainless steel industry. Her journey from a logistics graduate to a leadership role reflects her determination to overcome challenges and break barriers in a traditionally male-dominated field.

A foundation of learning and growth

Starting her career in logistics, Tholwana faced the difficulty of unemployment post-graduation. However, an opportunity paved the way for her to pursue postgraduate studies while working. This dual approach provided her with both the theoretical knowledge and practical experience necessary for career advancement.

Tholwana credits her academic and professional experiences with equipping her for her leadership role. "Studying while working gave me both the foundation and the insight needed to navigate complex challenges," she reflects.

Modern leadership and the evolving workplace

As a leader, Tholwana has embraced the evolution of leadership styles. She stresses the importance of moving beyond transactional methods to more inclusive and empathetic approaches. "To succeed today, you need to adapt to the times. That's the only way to build trust and inspire diverse teams," she explains.

Her passion for stainless steel further fuels her advocacy for the material, often educating others about its vast applications and potential.

Breaking barriers

Tholwana's role has not been without challenges. As a young Black woman leading teams in a male-dominated field, she has faced biases and assumptions about her abilities. "I have worked with older men who have been in the industry for decades," she says. "I approached it with humility, letting them teach me, but also with assertiveness to lead effectively." Her leadership style balances respect for experience with clear direction, earning her team's trust while challenging stereotypes.

Balancing multiple roles

Tholwana juggles her roles as a mother, wife, student, and leader with remarkable poise. She candidly discusses the difficulties of trying to "have it all," advocating instead for prioritisation to prevent burnout. "You need to choose what matters most in the moment," she advises, acknowledging the crucial role her family and mentors play in her ability to balance these demands.



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INTERVIEW

Empowering future leaders

A champion of diversity, Tholwana is actively involved in apprenticeship and training programs at NSSC. She prioritizes recruiting women into roles such as boilermakers and machine operators, providing them with broad training and career development opportunities. "We're opening doors for those who may not have considered these paths before," she says, celebrating the success of apprentices who have risen to leadership roles.

Emotional intelligence as a cornerstone

Tholwana underscores the importance of emotional intelligence in effective leadership. She believes self-awareness and understanding others' emotions are key to making balanced decisions. "You need to lead with empathy and build trust to inspire your team," she explains.

A vision for the future

Tholwana Mogowane's story is one of resilience, mentorship, and advocacy. Her leadership not only inspires those within her organization but also serves as a beacon for the broader stainless steel industry.

"There's a wealth of knowledge and people willing to help-you just need to find the right support at the right time," she says, encouraging others to seek mentorship and opportunities.

Through her dedication to empowering others and her passion for stainless steel, Tholwana continues to shape the industry and open doors for future leaders.

Multi-Business Division Joins for Strategic Growth in Stainless Steel Sector

[Multi Business Division \(MBD\)](#) has become the latest member of the Southern Africa Stainless Steel Development Association (Sassda), signalling its commitment to aligning with industry peers and contributing to the development of the local stainless steel sector. Known for its innovative approach to advanced metal-cutting applications, the company is developing its role in key industries such as metal fabrication and industrial processing.

Speaking on the decision to join Sassda, MBD Strategic Director **Christy Robinson** said, "Becoming a member of Sassda is a strategic step for us as we look to strengthen our position in the stainless steel industry. We're eager to collaborate with other members and leverage the association's network to drive innovation, sustainability, and efficiency across the sector."

Precision-focused expertise

At the heart of MBD's business is a focus on delivering advanced solutions for precision cutting, using plasma, oxy-fuel, and fibre laser technologies. The company provides a range of high-quality consumables, such as nozzles and electrodes, alongside fibre laser systems with capacities ranging from 3kW to 80kW. Its comprehensive approach includes installation, training and after-sales support, helping clients optimise their processes and reduce operational costs.

By catering to industries that require high efficiency and accuracy, MBD has built a reputation for reliability and technical excellence. Their solutions are designed to enhance productivity while addressing key operational challenges faced by their clients.

A commitment to sustainability

The company recognises the importance of sustainability within the stainless steel value chain. Their products incorporate recyclable materials such as copper and steel, contributing to more sustainable production practices.



Robinson explains, "We understand that sustainability is increasingly becoming a priority for the industry. We aim to play our part by exploring eco-conscious partnerships and providing energy-efficient solutions that help our clients reduce their environmental impact."

Tackling industry challenges

The stainless steel industry faces a variety of challenges, including fluctuating raw material costs, the push for greener production methods, and the rapid pace of technological change. To address these issues, MBD is focused on providing cost-effective, high-performance products and supporting customers with technical training and guidance to adopt new technologies.

Robinson notes, "We see significant opportunities for companies that can innovate and adapt to these challenges. By joining Sassda, we're looking to stay ahead of the curve by working with industry leaders and gaining insights into emerging trends."

Collaboration through Sassda

Membership in Sassda also provides MBD with a platform to collaborate with industry peers and stay informed about market developments. The company is keen to engage in partnerships that focus on technological innovation, supply chain efficiency, and sustainable practices.

"Sassda offers a unique opportunity to connect with key players in the stainless steel sector. We're particularly interested in exploring partnerships that can enhance our offerings and create value for both our business and the industry as a whole," concludes Robinson.

A Bright New Alliance!

Lumax Energy Joins Sassda

Lumax Energy is making waves in the renewable energy sector with its tailored approach to designing and manufacturing engineered solar mounting structures. Serving both rooftop and ground-mounted solar projects, the company has established itself as a key player in South Africa and across the African continent, delivering solutions that are innovative, reliable, and sustainable.

A key milestone in the company's journey is its recent decision to join the Southern Africa Stainless Steel Development Association (Sassda). This strategic move will enable Lumax Energy to access technical expertise, industry insights, and valuable networking opportunities that will further enhance its offerings.

Lumax Energy Director **Frans-Willem Vermaak** says, "Joining Sassda is an exciting step for Lumax Energy. While stainless steel forms a smaller part of our product portfolio, its role in critical components is undeniable. Through Sassda, we're looking forward to strengthening our use of sustainable materials and collaborating with like-minded industry leaders."

A core focus on strength and versatility

At the heart of Lumax Energy's business lies the commitment to creating robust mounting structures from high-grade aluminium and steel. These materials provide the strength and versatility required for renewable energy systems in diverse environments. Stainless steel is strategically incorporated in components where enhanced durability and environmental resistance are critical.

This material-driven approach ensures that Lumax Energy's products not only meet the rigorous demands of solar installations but also provide clients with solutions that are cost-effective and built to last.

Sustainability at the forefront

Sustainability is a guiding principle for Lumax Energy, influencing both its operations and product development. By optimising material use, reducing waste, and supporting eco-friendly practices, the company demonstrates a clear commitment to building a greener future.



While stainless steel's recyclability aligns with these goals, Lumax Energy places greater emphasis on designing efficient structures that enable the widespread adoption of renewable energy systems. This dual focus on sustainability and performance underscores the company's role in advancing environmentally responsible energy solutions.

Navigating challenges, embracing opportunities

The renewable energy sector is experiencing rapid growth, bringing both challenges and opportunities. Rising material costs and global supply chain disruptions pose hurdles, but Lumax Energy is tackling them head-on by investing in technology, refining manufacturing processes, and maintaining agility. These efforts enable the company to continue delivering value to its clients while staying ahead in a competitive market.

Collaborating for a stronger industry

Looking ahead, Lumax Energy envisions meaningful collaborations with Sassda members and other industry stakeholders. "By working together with Sassda, we can achieve more. Our focus is not just on creating better products but also on fostering a stronger, more innovative industry to support the renewable energy revolution," concludes Vermaak.

Forging the Future: Stainless Steel Innovations and Insights



In this edition of Sassda's Professional Profile, we spotlight **Daniel Beukes**, Head of Business Optimisation and IT at Fabrinox. Daniel's journey from Industrial Engineering graduate to a leader in stainless steel innovation highlights his strategic problem-solving and dedication to optimising business processes. From integrating new software projects to addressing South Africa's stainless steel challenges, Daniel emphasises resilience, collaboration, and local resource use as keys to industry growth...

What did you study after school and what is it about the discipline that attracted you to this field of study?

I studied Industrial Engineering at Stellenbosch University for four years, beginning in 2018 and ending in 2021. My interest in mathematics drove me to engineering, and I opted for Industrial Engineering because it provides a diverse skill set applicable to all sections of the value chain. This discipline allows for the application of engineering principles across multiple industries, allowing me to contribute to any business environment without being limited to a specific field. Since I was like most grade 12 students, unsure of what exactly I wanted to do after my

studies, this field provided the most opportunities. The opportunity to promote improvements in businesses, regardless of industry, was an essential element in my decision.

How did the first years of your career build on what you learned during your tertiary education but in a more practical setting? What were the key lessons you learned during this time?

In the first few years of my career, I was able to put my strategic and logical thinking skills into practice, particularly in problem-solving scenarios. A significant part of my focus was aimed at project management, where I experimented

with various methodologies to determine what was most effective for different situations. Consistency, resilience and adaptability were the most important lessons I learned early in my career. Although careful preparation is essential, the real difficulty is in adjusting when things do not work out as planned. It is crucial to have the flexibility to change course, make new goals, and avoid obsessing over what did not work. Additionally, when a strategy proves successful, thorough documentation is critical to ensure it can be replicated effectively in the future..

How would you describe a typical day in your current position? What are your key focus areas and areas of expertise?

As the Head of Business Optimisation and IT at Fabrinor, my normal day entails working closely with my IT team to ensure that all business-critical processes are executed without any warnings or disruptions. If any issues arise, my team and I focus all our attention on resolving them to minimise or prevent operational disruptions and/or downtime. When the systems are functioning, my team concentrates on configuring the system according to industry best practices and taking on projects designed to achieve cost savings or prevent user downtime. Ensuring we are initiative-taking in our approach to maintain the system.

My role also involves spearheading and overseeing different business process optimisation projects, collaborating with colleagues across the company to identify and implement new initiatives. I aim to balance projects that deliver quick wins with those that promise long-term success. Additionally, I stay informed about emerging technologies in the steel industry, assessing advancements that could provide future benefits and keeping us technologically on the forefront compared to our competitors.

What is the biggest project, product launch or innovation that you are working and what lessons has it taught you thus far?

I am currently leading the implementation of a new software system that will oversee quoting, parts nesting, laser cutting of plate materials, and part offloading. The challenge lies in fully integrating this software with our existing network and system. We operate both as an engineer-to-order and make-to-order company. Our service ranges from delivering components with lead times under 2 days to long-term projects, sometimes spanning over a year, where we deliver a full 360 service from customer concept and design to production, installation and after sales services. Managing this full spectrum within a single system is a complex task.

One of the key lessons I have learned is the importance of leveraging the strengths and technical expertise of our team members, assigning the right people to the right tasks. It is also crucial to maintain a clear focus on the

primary objectives of the project, minimising scope changes despite the additional features the software may offer, which can be revisited in future projects. Most important, clear communication is essential, especially when aligning multiple suppliers toward the same goal.

What do you feel are the biggest challenges facing South Africa's stainless steel sector at present and how can these be overcome?

The South African stainless steel sector is facing several challenges, primarily rising import costs and the need to balance speed and quality with short lead times expected by customers. Local firms that depend on foreign suppliers are vulnerable to changes in the market and adjustments to trade agreements or tariffs, such as those resulting from international political events like the most recent U.S. elections. This puts pressure on manufacturers to innovate while managing costs and complex projects. Additionally, a declining interest among the younger generations in the skilled craftsmanship work of stainless steel manufacturing threatens the industry's future.

To address these issues, local manufacturers must optimise resource allocation, prioritise local sourcing to reduce dependency on imports, and maintain clear communication throughout the supply chain. Maintaining the artisan legacy and making sure the industry stays competitive globally require investments in training and mentoring for younger employees, along with investing in automation of tasks where repetitive work underutilise human resources.

Why do you feel that stainless steel still has such an important role to play in growing South Africa's economy? What are the sector's inherent strengths that continue to add value to our economy?



Stainless steel is critical to South Africa's economy, driving job creation and supporting local communities. The industry employs a wide range of skilled workers, from artisans to engineers, contributing to economic stability. South African craftsmanship is globally recognised, with installations worldwide enhancing the nation's international reputation.

In addition to job creation, the stainless steel sector is essential to other industries, including construction, manufacturing, mining, and energy. The material durability, corrosion resistance, and limited maintenance make stainless steel the perfect material for infrastructure projects and manufacturing, facilitating long-term investments that propel economic growth. Additionally, by producing stainless steel components domestically, we can lessen our dependency on imports and preserve more economic value in the nation.

In addition, the industry is well-positioned to contribute to South Africa's sustainability goals. Stainless steel is 100% recyclable, making it an environmentally friendly choice that fits in with global and local sustainability trends. This enhances our economy further by promoting a circular economy model and reaffirming our dedication to environmentally responsible behaviours.

What do you consider as the most exciting developments happening in stainless steel right now and what sectors hold the greatest potential for the use of stainless steel in the future?

Improvements in precision and high-quality finishes, especially for the food and medical industries, are among the most exciting breakthroughs in stainless steel. Because of its strength, resistance to corrosion, and capacity to uphold hygienic standards - all of which are essential for medical devices and equipment used in food processing - stainless steel is becoming increasingly in demand in these sectors. Innovations such as improved surface finishes and high-performance alloys are key in the food industry, stainless steel equipment must endure constant cleaning and sterilisation without deteriorating, which has led to the development of more durable stainless steel grades.

In the future, advanced stainless steel will be widely used in industries including rail infrastructure and aerospace. Notably, Transnet's decision to open South Africa's rail network to private investment, could drive a spike in rail projects, potentially increasing the use of stainless steel in rail carriages and infrastructure. This move aims to enhance the country's rail capabilities and attract more private-sector engagement, this action will open new markets for stainless steel uses in environmentally exposed and high-stress rail components.

Overall, as industries seek to leverage the unique properties of stainless steel—combining strength, aesthetics, and corrosion resistance—the future holds promise, especially in environments requiring precision and durability.

For more info go to: <https://www.fabrinox.com>



Unlocking cost-effective solutions with smart stainless steel grade selection



Stainless steel is celebrated for its versatility and durability, but selecting the right grade requires more than relying on popular choices like 304 and 316. With a deeper understanding of alternative grades, such as ferritic and duplex steels, manufacturers can make smarter, more cost-effective decisions tailored to specific applications and embrace innovative solutions that maximise performance, reduce costs, and meet diverse requirements...

The versatility of stainless steel

Stainless steel is not a single material but a diverse family of corrosion-resistant alloys, each tailored to specific applications and performance needs. More than 220 officially recognised grades exist, each designed to balance mechanical, physical, and corrosion-resistant properties. The composition of stainless steel includes at least 50% iron and 10.5% chromium, with other elements such as nickel, molybdenum, nitrogen, niobium, and titanium added in



precise quantities to fine tune the material's characteristics. Carbon content is also carefully controlled to exceptionally low levels to improve weldability and resistance to corrosion.

The subtle variations in composition allow stainless steel to be classified into five primary categories:

- **Ferritic** - Known for its good corrosion resistance and affordability, ferritic grades are often used in automotive and domestic applications.
- **Martensitic** - These grades provide high strength and wear resistance, making them ideal for cutlery and surgical instruments.
- **Austenitic** - The most commonly used group, austenitic grades are prized for their excellent corrosion resistance and formability.

- **Duplex** - Combining the best of ferritic and austenitic properties, duplex grades offer high strength and superior corrosion resistance in specific environments.
- **Precipitation Hardening** - These grades achieve exceptional strength through heat treatment and are used in aerospace and high-performance industries.

This categorisation enables designers and engineers to select the right grade for the job, but limited knowledge often leads to defaulting to a narrow range of grades, which can restrict opportunities for optimisation.

Challenges in Grade Selection

In practice, the industry tends to rely on a small subset of stainless steel grades, primarily 304 and 316 from the austenitic category. While these grades are versatile and widely available, their dominance often stems from familiarity rather than suitability for specific applications. Typical selections include:

- **304** - A general-purpose stainless steel with basic corrosion resistance.
- **316** - A higher corrosion-resistant grade for use in marine and chloride-rich environments.
- **430** - A ferritic grade used for low-corrosion-risk applications.
- **3CR12** - A utility-grade stainless steel suitable for structural applications where appearance is not critical.

This narrow approach to grade selection often results in missed opportunities to explore cost-effective alternatives that may better suit the application's technical and financial requirements.

The limitations of austenitic grades

Austenitic stainless steels, especially grades 304 and 316, dominate global usage, accounting for over 80% of stainless steel consumption. Their popularity is due to their high nickel content, which enhances toughness, ductility, weldability, and corrosion resistance. However, these grades also come with limitations, particularly in applications involving high thermal stresses.

- **Low thermal conductivity:** Austenitic grades are less effective at dissipating heat, leading to localised hotspots during use
- **High thermal expansion:** These grades expand significantly when heated, causing material distortion (often referred to as oil canning) and residual stress during cooling

In environments where repeated heating and cooling cycles occur, such as fireplaces or outdoor cooking equipment, these thermal limitations can lead to structural failures, including stress corrosion cracking in

high-chloride environments. While not common, the risk of failure is significant and comes at a high material cost.

Cost implications of Nickel

Nickel is a key component of austenitic grades, but it is also a volatile commodity with significant price fluctuations. This volatility creates challenges for manufacturers working under fixed-price contracts, making it difficult to predict long-term costs. As a result, reliance on austenitic grades can introduce financial uncertainty into production processes.

Exploring Cost-Effective Alternatives

Overall, the stainless steel family offers many alternatives to austenitic grades that are often overlooked. Ferritic grades, for instance, provide excellent thermal performance and lower costs, making them an attractive option for applications like fireplaces, fire pits, and braai equipment.

Ferritic Grades

Grades such as 441, 444, and utility grades like 409 and 3CR12 outperform austenitic grades in terms of thermal conductivity and thermal expansion, making them ideal for high-temperature applications. Additionally, these grades:

- Are more affordable due to lower nickel content.
- Offer stable pricing, reducing the impact of market fluctuations.
- Retain good weldability and formability in the gauges required for domestic and industrial use.

By adopting ferritic grades, manufacturers can create durable, high-quality products at a lower cost, increasing market accessibility while maintaining performance standards.



Duplex Grades

Lean duplex grades, such as LDX 2101 and LDX 2001, offer another compelling alternative. These materials combine the strength of ferritic steels with the corrosion resistance of austenitic steels, resulting in:

- Higher strength, enabling thinner designs and reduced material usage.
- Lower nickel content, further reducing costs.
- Superior resistance to stress corrosion cracking, even in challenging environments.

These grades are particularly advantageous in structural applications where strength and corrosion resistance are critical, allowing manufacturers to optimise designs for both performance and cost.

Industrial applications: Intelligent material choices

The potential for cost savings extends beyond material properties to the design and manufacturing processes themselves. Consider industrial equipment such as bottling machines. These are often standardised to use grade 316L throughout for its hygienic properties. However, only the components in direct contact with the product require such stringent hygiene standards. Supporting structures, conveyor legs, and other non-contact parts could be fabricated from less expensive grades, significantly reducing material costs without compromising functionality. By integrating a better understanding of stainless steel grades into the design process, engineers can create innovative, cost-effective solutions tailored to specific requirements.



The role of stock availability and fabrication knowledge

Despite the clear benefits of alternative grades, barriers to adoption remain. One of the most significant challenges is stock availability. Distributors are reluctant to stock less commonly used grades due to limited demand, creating a cycle where these grades are not specified because they are unavailable. Breaking this cycle requires improved communication between manufacturers, stockists, and designers to identify emerging needs and trends.

Another critical factor is fabrication knowledge. Stainless steel, while versatile, requires careful handling to maximise its properties. Missteps during fabrication can lead to failures, even when the material itself is suitable for the application. For example: Duplex materials require specific welding techniques to prevent structural weaknesses and surface finishes must be properly managed to ensure corrosion resistance is maintained.

Organisations like Sassda play a vital role in addressing these issues by providing training and resources to improve industry-wide knowledge and skills. Promoting a learning culture within the stainless steel sector will be essential to fully realise the material's potential.

An abundant local market for lifestyle equipment

In South Africa, social gatherings often revolve around fireplaces, braais, and outdoor cooking equipment. Stainless steel is a popular choice for these products, offering durability, a sleek appearance, and an association with exclusivity. However, the current reliance on grades 304 and 316 drives up costs unnecessarily.

By shifting to ferritic grades, manufacturers could produce high-quality products at a lower price point, making stainless steel equipment accessible to a broader local market. Improved thermal performance would also enhance product longevity, ensuring customer satisfaction and brand loyalty.

Unlocking stainless steel's full potential

It's clear that stainless steel's versatility and performance make it a cornerstone material in engineering and design. However, its full potential can only be realised through informed grade selection that considers not only corrosion resistance but also mechanical properties, thermal performance, and cost.

Expanding the use of alternative grades, such as ferritic and duplex steels, presents significant opportunities for innovation, cost savings, and improved product performance. By fostering a culture of continuous learning and collaboration, the stainless steel industry can position itself as a global leader, delivering world-class solutions for diverse applications.



The Value of Sassda Membership: A Catalyst for Industry Growth

The Southern Africa Stainless Steel Development Association (Sassda) has long been a cornerstone for businesses, professionals, and stakeholders in the stainless steel sector. Sassda Executive Director, **Michel Basson** writes our aim is to provide a collaborative, resource-rich environment that not only drives growth within the industry but also creates a platform for our members to thrive.

“Membership in Sassda is much more than just a symbolic association. It offers tangible benefits that can enhance your business operations, improve your market standing, and ensure long-term success. Let’s explore how Sassda adds value across various key dimensions”.

1. Networking and Collaboration

One of the key benefits of being part of Sassda is the access it offers to an extensive network of industry players. Whether you are a professional, business, or stakeholder, we create opportunities for interaction, collaboration, and knowledge sharing. Sassda events, such as our Sport Days, Mill visits, and specialised sessions like our recent Laser Welding workshop, are excellent platforms for forging partnerships and fostering professional growth.

Moreover, participation in our sub-committee meetings and general events helps to build a robust network of like-minded individuals committed to pushing the industry forward. The relationships cultivated in these settings can open doors to new business opportunities and lead to valuable collaborations that benefit not just individual businesses but the sector as a whole.

2. Advocacy and Representation

Sassda has established itself as a leading advocate for the stainless steel industry, actively engaging with government and regulators to shape favourable policies. For instance, we successfully advocated for the removal of stainless steel from the list of materials affected by export restrictions. This was a significant victory for the sector, safeguarding export opportunities.

We’ve also been instrumental in negotiating the reopening of the stainless steel industry during the pandemic at 50% capacity, compared to the 30% allowance for the rest of the industry. Through our engagement with various government bodies and industry associations, we represent the collective voice of the industry, ensuring that even small businesses benefit from collective bargaining power.

3. Access to Information and Resources

Sassda members also enjoy exclusive access to market trends, forecasts, and research that help them stay ahead of the curve. Collaborations with entities like Africa House enable us to provide members with data on African projects and business opportunities.



Beyond market intelligence, we also offer technical support and resources such as guidelines and case studies to improve operational efficiency. For example, Sassda is developing a Manual of Best Practices for the manufacture of equipment used in hygiene industries, ensuring our members are equipped with the knowledge to maintain high standards.

4. Skills Development and Training

Sassda's commitment to continuous learning is reflected in our workshops, CPD programs, and webinars tailored to address the needs of our members. Our training programs cover a wide range of topics, from the technical aspects of stainless steel to courses designed for sales professionals. For instance, our updated Fundamentals of Stainless Steel course focuses on sales and distribution, ensuring members from across the supply chain derive real value.

These educational initiatives are often customisable, allowing members to focus on their specific areas of interest and improve their skills to remain competitive.

5. Cost-Saving Benefits

Sassda membership is structured to ensure that businesses of all sizes can afford to join and benefit. Our tiered membership system allows small and large companies to choose a level that best fits their needs, with benefits that often exceed the cost of membership. For example, members receive discounts on training events and free participation in key industry events.

6. Credibility and Reputation

Membership in a professional association like Sassda signals credibility and professionalism. Our globally recognised "Cross & Balls" logo is a mark of quality and adherence

to high standards, serving as a badge of reliability for our members. By adhering to Sassda's code of conduct, members also enhance their market reputation and build trust with clients, partners, and stakeholders.

7. Market Development and Growth Opportunities

Sassda is dedicated to supporting the growth of the stainless steel sector through market development initiatives. Currently, we are working on localising the fabrication of imported products like beer kegs and are in collaboration with stakeholders to produce 3CR12 replacements for wooden stakes used in vineyards and orchards.

In addition, Sassda is leading the charge in the development of a Stainless Steel Master Plan, which will serve as a roadmap for the next decade of growth.

8. Access to Events and International Exposure

Sassda not only organises industry-specific events but also facilitates participation in international trade expos and business matching programs. Our members have had the opportunity to showcase their products in Tanzania, Zambia, Mozambique, and soon, through Sassda's endorsement, will enjoy discounted rates at the Global Stainless Steel Expo: Africa in 2025.

Joining Sassda is an investment in your business's future. Whether it's through networking, advocacy, information access, or cost savings, the benefits of membership far outweigh the costs. As the collective voice of the industry, Sassda is uniquely positioned to drive the growth and success of the stainless steel sector, ensuring that our members are always at the forefront of industry advancements.

"One of the key benefits of being part of Sassda is the access it offers to an extensive network of industry players. Whether you are a professional, business, or stakeholder, we create opportunities for interaction, collaboration, and knowledge sharing"

Michel Basson

To find out more about Sassda click here: www.sassda.co.za or email Callum@sassda.co.za for specific member benefits that are relevant to you.



Uganda's economic boom thanks to powerful projects and oil discoveries

Uganda, officially known as the Republic of Uganda, is a landlocked East African nation, celebrated for its natural beauty and strategic importance in the region. With a population of approximately 49 million (as of 2024) and a vibrant, diverse economy, Uganda offers promising opportunities for business and investment. Its capital, Kampala, serves as a dynamic hub for trade, finance, and innovation. Governed as a unitary presidential republic, Uganda's political stability under President Yoweri Museveni has enabled significant strides in economic development, despite ongoing challenges.

Economic landscape

Uganda's economy is a mosaic of agriculture, services, and industry, each playing a critical role in its development. Agriculture remains the backbone, employing 70% of the workforce and contributing significantly to exports. Coffee, Uganda's flagship crop, stands as a leading foreign exchange earner, alongside tea, cotton, and sugarcane. The country is also seeing a surge in industrial activity, including manufacturing, construction, and mining, which together account for roughly 25% of GDP.

The services sector dominates Uganda's economy, contributing 44% to GDP, driven by trade, transport, and a burgeoning tourism industry. The country's diverse geography, ranging from volcanic mountains to vast savannas, provides the foundation for a thriving eco-tourism sector.

Uganda's oil reserves, estimated at 1.4 billion barrels, are set to transform its economy. Projects like the East African Crude Oil Pipeline (EACOP) and the Tilenga Project are expected to make Uganda a key player in regional energy markets, with oil production slated to begin by 2025. Combined with ongoing infrastructure projects, Uganda's economy is poised for robust growth, with GDP projected to expand by 6% in 2024.

Major development projects

1. The Malaba-Kampala Standard Gauge Railway (SGR)

Uganda is undertaking an ambitious rail infrastructure upgrade with the construction of the Malaba-Kampala SGR. This 273-kilometer railway will connect Uganda to the Kenyan SGR network, facilitating access to the Port of Mombasa and enhancing regional trade. The project, valued at €2.7 billion and led by the Turkish firm Yapı Merkezi, is expected to be completed by 2028. Designed to transport 25 million tonnes of freight annually, it is anticipated to reduce transportation costs and improve trade efficiency, reinforcing Uganda's role in East Africa's logistics network.

2. Oil and Gas Development -

The discovery of significant oil reserves has ushered Uganda into a new era of energy production. The Kingfisher Field, operated by China National Offshore Oil Corporation (CNOOC), and the Tilenga Project, managed by TotalEnergies, are at the forefront of this development. These projects aim to produce over 270 000 barrels of oil per day at their peak.

Complementing upstream production, the East African Crude Oil Pipeline will transport crude oil from Uganda to the Tanzanian port of Tanga. This pipeline, coupled with the

construction of a domestic refinery, positions Uganda as a future energy exporter, with annual oil revenues projected to exceed \$1-Billion. However, environmental concerns surrounding biodiversity and local livelihoods present challenges that need careful management.

3. Kampala Metropolitan Transmission System Improvement

To meet rising energy demands, Uganda is upgrading its power infrastructure. The Kampala Metropolitan Transmission System Improvement Project involves constructing new substations and upgrading existing ones in strategic locations. Funded by the Japan International Cooperation Agency (JICA), this initiative will add 1 320 megawatts to the transmission grid, ensuring reliable electricity supply for Uganda's urban and industrial growth.

4. Kikorongo-Bwera Road Rehabilitation -

Improved road connectivity remains a priority for Uganda. The Kikorongo-Bwera Road Rehabilitation Project aims to enhance a 38.2-kilometer stretch of road vital for regional trade and local community access. Managed by the Uganda National Roads Authority (UNRA), the project is expected to boost economic activity in western Uganda by facilitating the movement of goods and services.

Opportunities for investment

Uganda's strategic location at the heart of East Africa makes it an ideal gateway for regional trade. The country's participation in projects like the East African Community (EAC) integration initiatives enhances its connectivity to neighbouring markets, including Kenya, Rwanda, and South Sudan.

Investments in infrastructure, particularly transport and energy, are expected to yield substantial returns. The government has created a conducive environment for foreign direct investment (FDI) through favourable policies



and public-private partnerships. Additionally, Uganda's oil boom, combined with a growing middle class, offers opportunities across sectors such as construction, financial services, and retail.

Challenges and outlook

While Uganda's growth prospects are promising, challenges remain. High poverty levels, with approximately 40% of the population living below the international poverty line, underscore the need for inclusive development. Climate-related risks also pose a threat to agricultural productivity, which is central to rural livelihoods.

Despite these challenges, Uganda's economic trajectory is optimistic. Strategic investments in infrastructure, energy, and social services are setting the stage for sustained growth. For businesses and investors, Uganda represents a frontier market with abundant resources, a youthful population, and an evolving economic landscape ripe with opportunities.

Uganda is steadily positioning itself as a pivotal player in East Africa's economic development. With strategic investments in infrastructure and energy, coupled with an emphasis on regional integration, the country is poised to become a hub for trade, industry, and innovation. For businesses looking to invest in a dynamic and emerging market, Uganda offers compelling opportunities across multiple sectors.



Sassda Partners with GSSE 2025: A Strategic Opportunity for Members



The Southern Africa Stainless Steel Development Association (Sassda) is collaborating with the Global Stainless Steel Expo Africa (GSSE), scheduled to take place from March 4 - 6, 2025, at the Sandton Convention Centre in Johannesburg. This partnership provides a focused platform for Sassda members to engage with key stakeholders and explore new business opportunities within the stainless steel sector.

Targeted Exposure for Sassda Members

GSSE Africa 2025 offers Sassda members a structured environment to present their products and services to industry leaders from across Africa and internationally. With its emphasis on industries like construction, energy, mining, healthcare, and food and beverage, the expo enables members to connect with decision-makers in markets where stainless steel applications are critical.

The Expo's comprehensive exhibitor categories, including raw materials, polished sheets, welding equipment, and testing technologies, align with the competencies of Sassda members, ensuring that their expertise and capabilities are prominently showcased.

Key Member Benefits

Through its partnership with GSSE Africa, Sassda is providing its members with:

- **Exhibition Opportunities:** Access to dedicated spaces to display offerings alongside other key players in the stainless steel industry.
- **Networking Access:** Direct engagement with procurement professionals, technical experts, plant managers, and other stakeholders.
- **Knowledge Resources:** Participation in technical forums and panels addressing advancements in stainless steel processing, sustainability, and regulatory developments.
- **Market Insights:** Exposure to trends and business opportunities in stainless steel applications across African and global markets.

Supporting the growth of the industry

Sassda's involvement in GSSE Africa 2025 aligns with its mission to support the growth of the stainless steel industry in Africa. The event's focus on advancing technologies, such as heat treatment, welding, and material testing, provides members with valuable insights to enhance their capabilities and competitiveness.

Sassda Executive Director **Michel Basson** comments, "Our partnership with GSSE reflects our commitment to creating meaningful opportunities for our members to engage with global industry leaders, showcase their expertise, and contribute to the growth and sustainability of the stainless steel sector in Africa."

A strategic opportunity

GSSE Africa 2025 represents a practical and results-driven opportunity for Sassda members to expand their reach and strengthen their positions in key markets. Participation in the event underscores Sassda's strategic approach to supporting its members' business objectives and promoting the broader development of the stainless steel sector. For Sassda members, GSSE Africa 2025 is an opportunity to engage directly with industry leaders, explore emerging trends, and position themselves effectively in a competitive landscape.

Members interested in participating or seeking further information can visit www.gssexpo.com/africa/ or contact Sassda directly on (011) 883-0119.

Gauteng Golf Day Shines Bright

Sassda hosted its highly anticipated Gauteng Golf Day together with SAIW at the Bryanston Country Club, bringing together industry leaders and enthusiasts for a day of networking, camaraderie, and sport. The event saw exceptional participation, with a full course of 128 golfers taking part in the day's activities.

The golf day showcased the stainless steel industry's resilience and collaboration, with ten sponsored holes providing opportunities for participants to engage and unwind. In addition, the evening awards dinner, attended by 150 guests, served as a grand finale to the day, offering a platform to celebrate the industry's achievements and the spirit of togetherness.

Event sponsors lead the way

A wide array of sponsors contributed to the success of the day, reflecting the stainless steel sector's support for community engagement and professional development. Hole sponsors included:

- Columbus Stainless
- NDE
- Welding Bureau
- PFERD SA
- INNOX-V-Africa
- Gammatec
- Eduardo Construction
- Cosmo Training Academy
- BAMR
- Techtra Engineering Consultants

These sponsors not only highlighted their commitment to industry growth but also facilitated a lively and engaging atmosphere throughout the event. The generosity of prize sponsors Valbruna Stainless SA, Novametals SA and Wire Products Stainless Steel added an extra layer of excitement to the occasion and underscored the high level of industry support and provided an incentive for participants to give their best on the course.

