stainless steel
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NEW MARKETS NEW MOMENTUM IN 2026

STAINLESS STEEL MASTER PLAN
Sassda takes the lead

BEYOND THE SURFACE:
The hidden variables in electropolishing

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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

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

JOSE HERON
Accounts
jose@sassda.co.za

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A Year of Change, a Future of Purpose

This is the final edition of *Stainless Magazine* for 2025, marking the close of a year filled with unexpected developments within the Association, the industry, and the country at large.

At this time last year, we reflected on a busy 12 months that included our 60th Anniversary celebrations and the return of the Stainless Steel Awards. Now, as we look back on 2025, we recognise a year shaped by significant shifts, from major changes in global geopolitics and trade relationships to new challenges confronting local exporters who face growing uncertainty around existing and future markets.

Not all surprises were negative, however. We continued to enjoy relative stability in electricity supply and the welcome relief of South Africa's removal from the so-called financial grey list. Typically, GDP growth slows in the latter half of the year, but 2025 brought a positive revision to growth forecasts. Still, we know that unless South Africa can consistently sustain growth above 3%, neither our economy, our industry, nor our people will experience the improvement we need.

When assessing the current state of the stainless steel industry, we must do so against the broader backdrop of the decades-long decline of the national steel industry, once a powerful pillar of South Africa's economic development. Although it still employs close to 200 000 people and contributes around 1.5% to GDP, the sector has been weakened by years of deindustrialisation, declining production, job losses, and a steady erosion of competitiveness. This decline has not occurred by chance, but as the result of systemic policy failures, poor coordination, and inadequate implementation of recovery frameworks.

Strategic Direction Towards 2030

It became increasingly clear during 2025 that the steel industry is not recovering as intended under government's 2021 Steel Master Plan. Recognising this and noting the Plan's acknowledgment that the local stainless steel industry warrants its own dedicated strategy, Sassda has taken the initiative to develop a sector-specific strategic plan extending to 2030. This process is already underway and expected to be fully implemented within a year. While Sassda's mandate remains unchanged, the 2030 Strategy will sharpen our focus on supporting current exporters and assisting members looking to enter global markets.

Given the limited size of the domestic market, growth at sustainable levels can only be achieved through export expansion. For this reason, Sassda has applied for registration as an official Export Council to secure full benefits for members. We have also invested in developing staff skills and capacity to provide enhanced support in areas such as weld inspection and ISO readiness. Combined with our strong technical expertise, these capabilities will reinforce Sassda's consultancy offering as we move towards 2030.

With improved access to local and African market intelligence, we aim to position Sassda as the preferred source of stainless steel information in South Africa. The industry must be ready to seize the game-changing opportunities on the horizon, including those linked to South Africa's recently published energy plan, which features a potential nuclear build. Localisation and innovation remain strong sources of optimism, particularly as attention shifts to global markets. Most importantly, there is considerable scope for growth in Sub-Saharan Africa, the world's largest developing market, right on our doorstep.

"The industry must be ready to seize the game-changing opportunities on the horizon, particularly in Sub-Saharan Africa, the world's largest developing market on our doorstep."

Celebrating progress and looking ahead

While these strategic developments have unfolded behind the scenes, 2025 was also an excellent year for our ongoing activities. Our four regional golf days have now become a firm tradition and were, once again, resounding successes. The Gauteng event even introduced a well-attended padel competition. Our digital presence continues to grow across social media platforms, and we have achieved solid exposure in mainstream industry publications. Sassda also represented members' views effectively in the government's investigation into import tariffs, demonstrating objectivity and ensuring that the full value chain was fairly represented throughout the process.

This digital edition of Stainless Magazine is designed for easy reading anywhere, including over the December holidays. As always, it features the popular GPS Global Market Intelligence roundup, insights from a successful recent business breakfast, and updates on the Stainless Steel Master Plan. Our more technically minded readers will enjoy the articles on electropolishing and the circular economy, while an in-depth feature on Ethiopia as part of our African Market series may well challenge your perceptions about doing business on the continent.

With that, the Sassda team and I extend our heartfelt thanks for your loyal and energetic support throughout 2025. We wish you a restful and peaceful festive season, and a safe return in the new year to continue working with a material that remains, quite simply, brilliant!

Michel Basson, Sassda Executive Director

South Africa's Stainless Steel Sector Eyes Renewal & Regional Expansion

Against a backdrop of ongoing industrial decline, South Africa's stainless steel industry is positioning itself for renewal through strategic collaboration, export focus, and an Africa-first growth vision. These were the key themes emerging from the Sassda State of the Stainless Steel Nation Breakfast held in October 2025, where industry leaders gathered to assess the sector's current health and future prospects.

From Decline to Opportunity

Speaking at the event Sassda Executive Director **Michel Basson** commented, "While the traditional steel industry has faced enormous structural and operational pressures, stainless steel has quietly been writing its own comeback story. Our challenge now is to move from survival to strategic growth, both locally and across Africa."

He noted that the contrast between the carbon and stainless sectors is stark. Domestic steel consumption has plummeted from 9.4 million tons in 2004 to just over 4.1 million tons in 2024, due to de-industrialisation and weak infrastructure spending. By comparison, stainless steel consumption has grown steadily since the pandemic; outpacing GDP and proving its value in high-tech and

high-hygiene sectors like food processing, energy, and specialised manufacturing.

Basson emphasised that stainless steel's versatility and durability position it as a key enabler in sectors aligned with sustainability and circular-economy principles.

"We're not just producing metal; we're supplying the materials that make modern, efficient industries possible, from renewable energy to water treatment and clean manufacturing."

Policy and Production Pressures

The breakfast discussion laid bare the multiple headwinds facing local producers: high energy tariffs, logistics bottlenecks, and an uneven playing field against cheap, subsidised imports, particularly from China.

Load-shedding and port delays continue to disrupt supply chains, while tariff interventions under the 2021 Steel Master Plan have had mixed results. Rather than boosting competitiveness, they have often inflated input costs and stifled innovation.

The sector's energy intensity remains a major concern. Outdated blast furnace technologies persist in carbon steel production, while the transition toward electric arc furnaces and low-emission processes has been slow.

Meanwhile, new environmental regulations, including the EU's Carbon Border Adjustment Mechanism (CBAM), are tightening the screws on carbon-heavy exports.

Stainless Steel Master Plan

In response, Sassda is spearheading a Stainless Steel Master Plan (see article on page 10), a roadmap aimed at guiding the sector through 2030. The plan is built around five phases, beginning with comprehensive stakeholder engagement and deep structural analysis by the end of 2025. Subsequent stages will define strategic priorities, design actionable programs, and roll out implementation across the value chain from 2026 onward.

The plan's core message is clear: domestic demand alone cannot sustain the stainless steel industry. Export readiness, market intelligence, and technical excellence will determine long-term survival.

"We must become a nation of exporters again," Basson said. "Our members need access to intelligence, certification, and training that make them globally competitive. The African market is not an afterthought; it's the growth frontier."

Unlocking Africa's Industrial Upside

The second half of the breakfast focused on that very frontier. Africa House Director **Duncan Bonnett** delivered an in-depth presentation titled "South Africa's Steel and Stainless Steel Industry: Strategic Outlook and Opportunities." His message was both pragmatic and optimistic: Africa's urbanisation and industrial expansion are rewriting the continent's demand profile and South Africa has a window of opportunity to capture value.

"Africa is urbanising faster than any other region in the world," Bonnett noted. "By 2035, the number of large cities will more than double, from 128 to around 300 and their combined population will approach 800 million. That creates enormous infrastructure and supply-chain needs, and stainless steel is integral to meeting them."

He pointed to the rise of agri-processing, food manufacturing, and value-added export industries as particularly promising for stainless steel applications. Africa holds 60% of the world's unused arable land, yet much of its agricultural output still leaves the continent unprocessed.

Governments from Angola to Côte d'Ivoire are now restricting raw exports and incentivising local production. "We're seeing a clear shift from raw material extraction to value creation," Bonnett said.

Infrastructure, Energy, and Technology

Africa's infrastructure boom presents further opportunities. Major port, rail, and corridor projects, from the Lobito Atlantic Corridor to new east-west logistics routes are connecting inland resource hubs to global markets. Simultaneously, a wave of investment in energy projects, from renewables to nuclear, is driving demand for durable, corrosion-resistant materials.

Bonnett highlighted that energy diversification, mixing fossil fuels, renewables, and circular systems, requires stainless steel in everything from pipelines and turbines to hydrogen storage. "The clean energy transition isn't just about megawatts; it's about materials. Stainless steel has a central role in that value chain."

ICT infrastructure is another fast-emerging segment. With data centre development accelerating across Kenya, Nigeria, and Ghana, stainless steel is being used in structural frameworks, cooling systems, and secure enclosures. Combined with growth in mining and local mineral processing, particularly for critical minerals like lithium and cobalt, these trends are widening the continent's industrial base.

Trade and Market Access: The AfCFTA Advantage

South Africa currently exports about R570-Billion in goods to Africa each year, mostly to SADC countries. Yet its presence in East and West Africa remains limited. Bonnett argued that this imbalance represents untapped potential, especially as the African Continental Free Trade Area (AfCFTA) continues to reduce tariffs and streamline market access.

"AfCFTA is not just a trade deal, it's an industrial platform," he said. "Once the Pan-African Payments and Settlement System come fully online, we'll be able to transact in local currencies, reducing forex risk and opening new pathways for small and medium exporters."

He called for South African manufacturers to invest in compliance, logistics, and localised partnerships. "If we're serious about regional integration, we must move from talking about Africa as a market to engaging it as a network," Bonnett said.

Collaboration as the Key to Competitiveness

Both Basson and Bonnett emphasised that success will depend on collaboration across the value chain, from policymakers and producers to academia and end users. Innovation, cleaner technologies, and strategic advocacy must all converge if the sector is to thrive. "Industrial competitiveness isn't built in isolation. It's built through partnerships, shared intelligence, and the courage to invest in the future," said Basson.

Despite its challenges, South Africa's stainless steel sector stands on the threshold of renewal. With global sustainability trends aligning with African industrialisation, and with coordinated action under Sassda's Master Plan, the industry has an opportunity to reclaim its role as a cornerstone of modern manufacturing.

Market Intelligence to Boost Business Growth

Welcome to the highlights edition of the Sassda GPS eNewsletter, your go-to source for the key developments shaping South Africa's business, industrial, and economic landscape. Each month we distribute this popular market intelligence aggregator to an exclusive database of members and associates. This selection of the best articles from the last quarter, aims to extend access to this quality content by prioritising the top stories from the latest issues...

Ramokgopa unveils R2.23trn electricity generation plan

Minister of Electricity and Energy **Kgosientsho Ramokgopa** has announced an ambitious plan to build 105 000MW of new generation capacity between now and 2039 to the value of R2.23 trillion. This is more than double Eskom's current generation capacity of 50 230MW. The plan will ensure energy security to support economic growth of at least 3% from 2030, lay the foundations for a revival of the struggling construction industry, and be a lever for industrialisation...**Read more**

Transnet plans $7bn of infrastructure upgrades

South Africa's state-owned freight and logistics company Transnet plans to invest R127bn ($7.3bn) over five years in modernising rail lines and upgrading ports. The state entity has allocated R24bn to infrastructure in the previous financial year and has budgeted R25bn for the current year, "We will go to market for partners as well as for funders," Phillips said, citing potential projects such as the Richards Bay dry-bulk terminal and the Pier 2 container concession in Durban...
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International car brands throw lifeline to South Africa

South Africa has secured commitments from Chinese and Indian car companies to upgrade their semi-knocked-down (SKD) vehicle assembly operations to full-scale. The government is in talks with multinational carmakers, who have South African factories – including Toyota and Ford and their suppliers – on ways to safeguard the industry's future as it navigates declining production volumes, stiff competition from China, tariff uncertainty and an expensive shift to electric vehicles... **Read more**

How construction contractors can avoid hidden project risks that break the bank

Construction projects are fraught with hidden risks that can derail budgets and timelines. From unclear contract terms to incomplete site assessments, contractors often overlook key red flags. Experts recommend a more rigorous pre-construction planning process, including legal reviews and independent audits of site conditions. Digital tools for risk tracking and real-time communication also help mitigate surprises. By proactively addressing potential issues, contractors can shield themselves from major financial shocks and reputational damage....
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Global steel giant to exit South Africa with $460m takeover imminent

Talks between global steel giant ArcelorMittal and South Africa's Industrial Development Corporation (IDC) over the potential sale of the steelmaker's local operations have entered an advanced stage, signalling a shift in Africa's steel industry landscape. According to people familiar with the matter, **Ondra Otradovec**, ArcelorMittal's head of mergers and acquisitions, is currently in South Africa for high-level discussions with both the IDC and the Department of Trade, Industry and Competition (DTIC). His presence is seen as a sign that negotiations have accelerated...
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Rooftop solar no at 7 300MW overtakes all Eskom's IPP capacity

Rooftop solar capacity in South Africa has reached a staggering 7 300MW, surpassing the total output of all Eskom's Independent Power Producer (IPP) projects combined. This growth highlights a significant shift toward decentralized, consumer-driven energy production amid persistent grid instability. While this transition offers resilience, it also raises challenges around regulation, grid balancing, and equitable access. Experts warn that policy must evolve to integrate private generation without undermining the national energy strategy.....**Read more**

New cranes set to boost efficiency at Cape Town container terminal

Transnet has launched nine new rubber tyred gantry cranes (RTGs) at the Cape Town Container Terminal (CTCT) in a bid to improve throughput and operational efficiency. These are part of a broader order of 28 RTGs under a R3.4 billion investment to upgrade terminal capacity, with 19 units still being assembled. The new machines feature anti-sway systems and can operate in wind speeds up to 90 km/h - an upgrade over the current RTGs, which are limited to 72 km/h. They're also equipped with video camera systems offering 3D views to assist with load and crane handling...**Read more**

South Africa in talks with chinese automakers to boost local production

South Africa is negotiating with several Chinese automakers to establish local manufacturing operations as part of a broader strategy to revive domestic automotive production. According to Deputy Trade and Industry Minister **Zuko Godlimpi**, a Chinese company has already expressed interest in setting up a plant in East London or Nelson Mandela Bay. South Africa is aiming to shift from being an importer to a regional manufacturing hub, with a focus on hybrid and electric vehicles. With over 15 Chinese car brands already active locally, the government is reviewing import tariffs to protect local industry from an influx of low-cost imports...**Read more**

Transnet Engineering signs another contract with Eswatini Railways

Transnet Engineering (TE) has signed a new three-year deal with Eswatini Railways for the supply of 26 wagon wheelsets and locomotive maintenance services. All wheelsets will be manufactured in South Africa, while TE technicians will handle on-site maintenance in Eswatini. This contract builds on an existing partnership, which includes a two-year diesel locomotive maintenance agreement. TE's efforts are aimed at empowering Eswatini's rail sector by building local skills and internal technical capacity, demonstrating the regional value of South Africa's manufacturing and engineering expertise...

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Two coastal hubs power Africa's future

In the Western Cape, Saldanha Bay is being reimagined as a multi-billion-dollar hydrogen export hub. Nearly 800 kilometres east, the Coega Industrial Development Zone is assembling what could become Africa's largest green ammonia plant.

Both are betting they can capture a slice of what the European Union alone estimates will be a 10-million-tonne annual hydrogen import market by 2030...

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International Webinar: Stainless in Food and Beverage Production

During a recent World Stainless webinar, Secretary-General **Tim Collins** explained why stainless steels are the perfect food and beverage contact material and outlined compelling academic research concerning the health risks associated with other material choices.

Click here to watch the full presentation:

Sassda leads the development of the Stainless Steel Master Plan to 2030

Sassda is proud to announce its leadership in the development of a Stainless Steel Master Plan (SSMP) a comprehensive roadmap to guide the growth, competitiveness, and sustainability of the South African stainless steel sector through to 2030.

The initiative represents a major milestone for the industry, giving stainless steel the dedicated strategic focus it has long required. It builds on the Department of Trade, Industry and Competition's (the dtic) Steel Master Plan, launched in 2020 as part of the country's broader Reconstruction and Recovery Plan. While that framework provided direction for the general steel sector, stainless steel featured as only a small component. The new Master Plan now ensures that the sector's unique value, challenges, and opportunities are addressed in full creating a clear and coordinated path forward.

Sassda Executive Director **Michel Basson** explains that the project recognises the importance of stainless steel as a value-intensive industry with significant downstream impact. "This Master Plan gives stainless steel the structured, long-term attention it deserves. It brings every part of the value chain into one coordinated process aimed at measurable, sustainable growth," he says.

A partnership built on collaboration

The Stainless Steel Master Plan is being developed through extensive collaboration between industry and government. It is a sector-wide partnership that includes stainless steel producers, fabricators, suppliers, retailers, government departments, regulators, labour unions, and academic institutions.

Among the key partners are the dtic, South African Bureau of Standards (SABS), Council for Scientific and Industrial Research (CSIR), Southern African Institute of Welding (SAIW), South African Iron and Steel Institute (SAISI), South African Property Owners Association (SAPOA), and the Manufacturing Circle. Universities offering metallurgy and engineering programmes are also contributing to the process, along with environmental and labour representatives.

This broad involvement ensures that the plan is truly representative of the stainless steel value chain, balancing industrial priorities with sustainability, skills development, and transformation goals. Sassda's role is to facilitate and coordinate the process, ensuring that all partners contribute to a shared vision for the sector's long-term success.

From recognition to action

The Steel Master Plan identified stainless steel as a sector with strong potential for value addition, export growth, and employment creation. Building on that foundation, the SSMP will focus on expanding local manufacturing capacity, stimulating domestic demand, and growing exports of stainless steel products.

Key challenges such as import competition, fragmented regional markets, and the need for greater downstream capacity will be directly addressed. At the same time, the

plan highlights stainless steel's role in high-growth areas including food processing, water infrastructure, renewable energy, and clean technology sectors that will define the next generation of industrial opportunity.

"Through our participation in the Steel Master Plan, we built valuable public–private partnerships. That experience now positions us to lead a process focused entirely on stainless steel and the actions required to secure its long-term sustainability.

"Through this framework, Sassda aims to create a practical and measurable set of actions that can be implemented across the industry, ensuring that strategic collaboration translates into real outcomes from job creation and localisation to technology transfer and skills development," says Basson.

A structured roadmap to 2030

The Stainless Steel Master Plan is being developed in five distinct phases over the next four years. The first phase, currently underway, focuses on stakeholder mapping, consultation, and a detailed assessment of the sector's structure, capacity, and performance. This includes a comprehensive SWOT and PEST analysis and a baseline audit of South Africa's stainless steel manufacturing capability.

By May 2026, Sassda aims to complete the first three phases, which will define a shared vision, mission, and set of strategic goals for the industry. The fourth phase will establish a formal implementation and monitoring framework by October 2026, ensuring accountability and measurable performance indicators. The fifth and final phase, running from 2027 to 2029, will involve annual progress reviews, a mid-term evaluation in 2028, and a final assessment in 2029 setting the stage for the next planning cycle to 2030.

The Five Phases of the Stainless Steel Master Plan

Phase 1 - Stakeholder Mapping and Sector Analysis (2025–2026)

Identification and engagement of all stakeholders across the stainless steel value chain. Includes a full SWOT and PEST analysis and a baseline audit of local capacity and capability.

Phase 2 - Defining Sector Vision and Mission (Early 2026)

Development of a shared vision, mission and set of guiding principles for the stainless steel sector, informed by stakeholder input.

Phase 3 - Setting Strategic Goals (By May 2026)

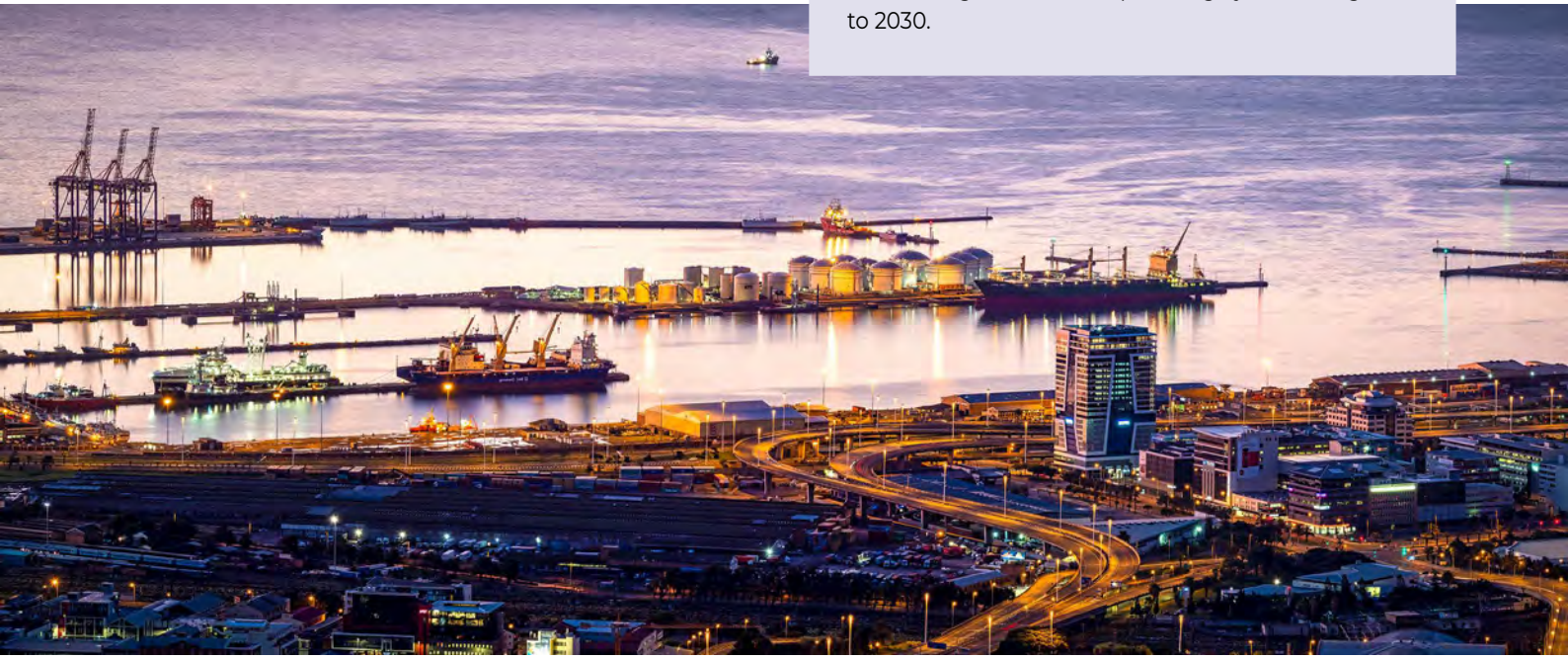
Agreement on key strategic goals focusing on localisation, skills development, sustainability, circular economy practices and export growth.

Phase 4 - Implementation Framework (By October 2026)

Establishment of an implementation and monitoring structure to ensure accountability, supported by measurable performance indicators.

Phase 5 - Evaluation and Review (2027–2029)

Annual reviews starting in 2027, with a mid-term evaluation in 2028 and final assessment in 2029. Results to guide the next planning cycle leading to 2030.



All targets will be set according to the SMART principle specific, measurable, attainable, realistic, and time-bound to ensure progress is tangible and results-driven.

Aligning with Sassda's Vision 2030

While the Master Plan represents a collective industry initiative, it is closely aligned with Sassda's internal Vision 2030, which charts the association's path toward long-term relevance, resilience, and influence.

Vision 2030 focuses on strengthening membership engagement, improving technical and market support services, promoting exports, and deepening Sassda's involvement in standards and policy development. It also reaffirms Sassda's commitment to representing the entire stainless value chain from producers and fabricators to end-users through credible technical expertise and market insight.

Together, Vision 2030 and the Stainless Steel Master Plan provide a two-tiered approach to growth: one strengthening Sassda's institutional capacity, and the other guiding the broader industry's collective advancement.

As Basson notes, "Vision 2030 defines who we are as an association, while the Master Plan defines how the industry can grow and compete globally. The two are designed to reinforce each other."

Building a sustainable future

The development of the SSMP reflects Sassda's long-standing belief that true industrial growth depends on partnership between business, government, and labour. The plan will focus on practical implementation, ensuring that collaboration delivers tangible outcomes such as increased local production, improved export performance, and the creation of sustainable employment opportunities.

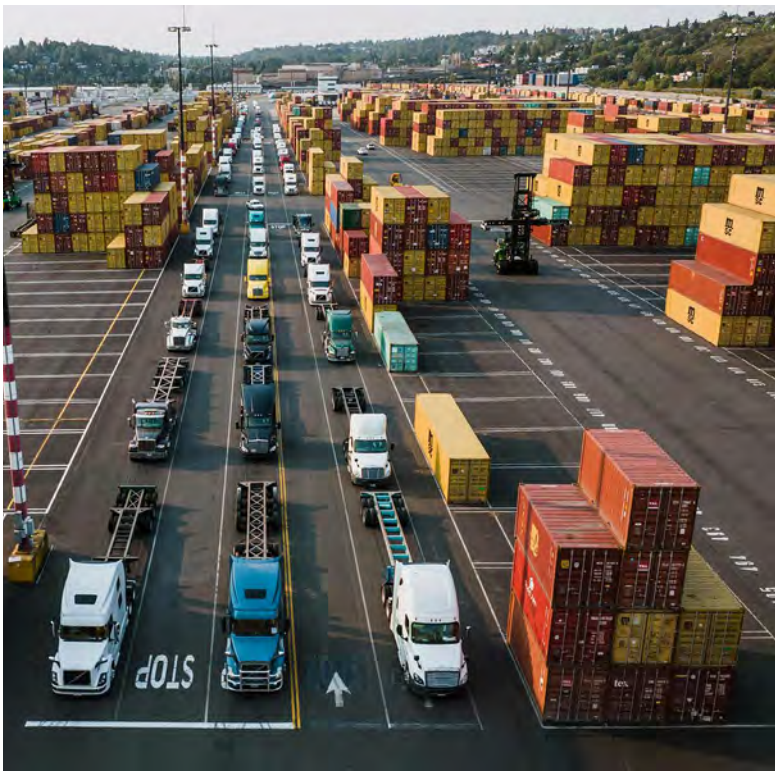
The stainless steel sector has shown resilience through periods of economic and operational pressure, but Sassda recognises that long-term competitiveness requires a structured, forward-looking strategy. The Master Plan provides exactly that a framework that prioritises sustainability, accountability, and shared growth.

"The Master Plan is about practical action, not policy statements," Basson explains. "It provides the structure, focus and accountability the industry needs to build competitiveness and sustainability."

Positioning South Africa globally

As Sassda leads the coordination of the Stainless Steel Master Plan, it continues to strengthen its own strategic focus under Vision 2030. Together, these two frameworks are set to position South Africa as a trusted global producer of high-quality stainless steel products for both domestic and international markets.

Through collective action, data-driven planning, and a renewed sense of purpose, Sassda and its partners are ensuring that stainless steel remains the material of choice for modern, sustainable development and that the South African stainless steel industry is ready to meet the challenges and opportunities of the decade ahead.



SA Stainless Sector Supports Circular Push

Sassda recently attended the latest South African Circular Manufacturing Initiative (SACMI) stakeholder engagement, reinforcing its mandate as the voice of stainless steel and its role in representing the interests of the entire South African value chain.

From Decline to Opportunity

The meeting marked a significant step in aligning the stainless steel sector with national efforts to formalise and accelerate circular manufacturing. Sassda says many of its members have already embraced circular economy principles, not out of policy, but out of necessity.

Sassda Executive Director **Michel Basson** comments, "Our industry has been applying circular principles for years, not always by design, but by economic imperative. We optimise material, reduce waste, and prioritise recyclability because our margins depend on it."

This aligns closely with SACMI, a flagship programme under the Department of Science, Technology and Innovation (DSTI). SACMI is engaging stakeholders across the country to shape a national circular economy strategy that will define the next decade of industrial development.

Spearheaded by the National Cleaner Production Centre of South Africa (NCPC-SA), SACMI aims to embed circular economy principles deeply into South Africa's industrial base by leveraging science, technology and innovation (STI). Grounded in the 2019 STI White Paper and aligned with the 2022–2032 STI Decadal Plan, the initiative is setting the course for a cleaner, more efficient and globally competitive manufacturing ecosystem.

At the heart of this process is a series of focused stakeholder sessions, surfacing the practical challenges, knowledge gaps and innovation opportunities faced by industry. These inputs will inform the final SACMI Strategy Report and help direct future investments and policies.

Existing Practices, Unrecognised Progress

While many stakeholders still see circular economy adoption as a future goal, the stainless steel sector has quietly led in several areas. From material optimisation and alloy separation to energy efficiency and advanced manufacturing, the industry has built up practices that now align closely with SACMI's four strategic pillars: Resource Efficiency and Cleaner Production, Circular Product Design, Advanced Manufacturing, and Remanufacturing.
Basson points out that fabricators already adopt meticulous nesting techniques to reduce waste, leverage high-precision NC laser and plasma cutters to cut down on labour time, and separate alloy-specific scrap to maximise recycling value. These aren't just sustainability efforts; they're key to commercial survival.

Stainless steel itself is also playing a pivotal role in this shift. Given that it's 100% recyclable and currently recycled at rates exceeding 96%, it naturally fits into circular manufacturing models. In addition, nearly 80% of primary stainless steel materials used by mills in South Africa originate from recycled stainless or carbon steel, a statistic that places the sector well ahead of global standards for material circularity.

"Our sector didn't wait for circular economy frameworks to start operating more sustainably," says Basson. "That said, formalising and accelerating these efforts through SACMI will help us extract more value and help other sectors follow suit."

Four Pillars for Industrial Modernisation

The SACMI strategy outlines four STI priority areas that will guide its implementation over the next 5 to 10 years:

- **Resource Efficiency and Cleaner Production** - Encouraging reduced raw material input, energy, and water use while maximising productivity and minimising waste.
- **Circular Product Design** - Integrating circularity at the earliest stages of product development to enable easier reuse, repair, or recycling.

- **Advanced Manufacturing** - Promoting the adoption of innovative technologies such as AI, robotics, additive manufacturing, and digital twins to enhance efficiency and enable cleaner processes.
- **Remanufacturing** - Rebuilding or upgrading used products or components to original or improved specifications to extend product lifespans and retain economic value.

While resource efficiency and some advanced manufacturing practices are already embedded in the stainless steel sector, Basson notes that circular product design and remanufacturing remain untapped frontiers. "There's a clear opportunity to invest in local remanufacturing capacity. It's not just about sustainability, it's about competitiveness. Circular design thinking can enable us to localise products, develop new markets, and reduce dependency on imports."

From Awareness to Action

A key takeaway from the recent SACMI focus group sessions is the need for broader awareness, education, and tangible case studies to bridge the gap between theory and implementation.

The sector has long embraced resource efficiency because it offers immediate cost benefits, but some circular economy interventions especially those involving newer technologies or rethinking entire value chains require upfront investment and long-term planning. In South Africa's constrained economic climate, this presents a challenge.

"Most fabricators can't afford to take big technological leaps without support. What we need are pilot projects, shared learning, and STI-led clusters that de-risk innovation," says Basson.

He adds, "A proposal from the stainless steel sector involves a SACMI-supported pilot cluster where five companies jointly implement circular economy strategies, share performance data, and evaluate results in a real-world context. These outcomes can then be scaled across the broader industry."

Another practical proposal is localising the production of stainless steel beer kegs, which are currently all imported. By designing and manufacturing these products locally under circular economy principles, the industry could develop an export-competitive product while strengthening domestic capacity.

Closing the Gaps

Despite its progress, the industry still faces significant gaps, particularly in the adoption of circular product design and the development of remanufacturing ecosystems. These require not just technical capabilities, but also access to markets, finance, and specialised knowledge.

STI has a critical role to play here, especially in creating training programmes, funding pilots, and compiling local case studies that showcase proven circular models.

Basson comments, "We don't need global examples, we need local proof points. If STI can help us gather data, develop case studies, and support technical training, we can move from theory to impact faster."

Sassda is already playing its part by integrating circular economy content into its training programmes and publications, and by using its platforms to promote awareness across the sector. However, Basson says stronger collaboration with research institutions, government agencies, and innovation hubs is essential to sustain momentum.

Shaping the Next Decade

The SACMI strategy is not just a plan, it's a call to action. By connecting the dots between sustainability, innovation, and economic resilience, it offers South Africa's manufacturing sector a real path toward long-term transformation.

For the stainless steel industry and other sectors navigating complex market pressures, this isn't just a moral imperative; it's a commercial one. SACMI's emphasis on practical implementation, stakeholder input, and measurable outcomes could position South African manufacturers not only as greener, but as smarter, more agile players in the global arena.

"Circular economy adoption is not an expense, it's an investment in our future," Basson concludes. "And with the right STI support, we can turn that investment into growth, resilience, and leadership.

Lourens Kloppers: A Vision for Excellence

With a background in Chemical Engineering and hands-on experience across large-scale industrial projects, BCG Technical Director **Lourens Kloppers** is focused on raising technical standards and driving knowledge transfer in South Africa's stainless steel sector. His leadership combines in-depth engineering insight with a commitment to education, quality and collaboration, ensuring world-class projects in an increasingly advanced and hygiene-focused global market...

Please provide some background on where you come from, your school and tertiary education and where you first started working?

I was born in Kleinzee on the West Coast and began my schooling there before attending Worcester Gymnasium as a boarder for high school. I then studied Chemical Engineering at Cape Peninsula University of Technology as a bursary student for six years. After completing my Master's research, publishing peer-reviewed work and graduating with an MEng, I moved to Johannesburg. My first professional role was as a Systems Engineer in the filtration sector, and it was during this period that I was introduced to the team at BCG.

What are some of the key work experiences or projects that you have worked on that have challenged you but also helped to shape your skills, experience and career advancement?

Early in my career, I had the opportunity to intern at a diamond research laboratory. As a student, I was surrounded by industry experts, professors and world-class equipment. I used that opportunity intentionally. I asked questions constantly, learned fearlessly, and absorbed everything I could. This mindset of curiosity and saying "yes" to new challenges accelerated my growth far quicker than most graduates.

In my first professional role, this translated into the ability to design and build novel industrial filtration systems that still operate successfully in the market today. This hands-on exposure to engineering design, problem solving, technical communication and customer engagement laid a strong foundation for the next stage of my career.

Joining BCG allowed me to apply this experience at scale, contributing to major projects across the food, beverage and related industries. A key highlight was contributing to the building of the world's largest cidery, based in Springs. This project reinforced my passion for high-impact engineering and highlighted the value of collaboration.

What is your current position and how would you describe a typical day on the job?

I am the Technical Director at BCG Stainless Steel Services, where I oversee our projects and manufacturing teams. A typical day involves reviewing progress across active projects, engaging with customers and visiting sites to scope technical requirements, and providing engineering support. I also handle high-level technical queries, guide decision-making and ensure operational alignment across the business.

What would you say are the biggest i. work and ii. life lessons you have learnt thus far in your life?

In terms of work, you don't need to know or be able to do everything yourself. What matters is knowing the right people who have strengths you don't. Early in my career as a young engineer, I thought I needed to study further to fill the gaps in my knowledge, particularly in electrical equipment and instrumentation. But I quickly learnt that collaboration and leveraging the skills of others is far more powerful. By combining my strengths with the strengths of others, I achieved far more than I could have achieved alone.

"An overall life lesson is, do the work first, the results will follow. You cannot expect external reward or motivation to come first before you start putting in the effort."

The raise comes after the value is proven, not before. This applies to fitness, relationships, business and personal development. Showing up, consistently, before the reward arrives is what builds character, momentum and trust. The results are merely validation - not the fuel.

How do you hope to take your career to even greater heights - what are your plans for the future?

In the next stage of my career, I am focused on expanding my industry impact and leadership. I will soon be a certified European Hygienic Engineering & Design Group (EHEDG) trainer, which will enable me to transfer hygienic engineering knowledge into the South African food and beverage sector. My goal is to develop the next generation of operators and engineers, elevate industry standards and contribute to improved food safety, reduced waste and greater manufacturing efficiency in our region. Ultimately, I want to continue playing a role in shaping an industry where South Africa competes globally on both quality and innovation.

My goal is to develop the next generation of operators and engineers, elevate industry standards and contribute to improved food safety, reduced waste and greater manufacturing efficiency in our region

In your opinion what are the biggest challenges the South African stainless steel industry currently faces and what are some of the innovative ways these can be overcome?

One of the biggest challenges South Africa's stainless steel industry faces is inconsistent product quality and a lack of knowledge at end user level. This creates space for low cost, substandard material and poor installation practices to creep into the market, which erodes confidence in stainless steel as a long term engineering solution. Another major challenge is the inefficiency and inconsistency in government systems, which creates confusion and drives additional cost into the value chain.

To overcome this, we need to raise industry competency and transparency. Increased technical education, stronger industry standards, verified traceability of materials and accredited training (such as EHEDG) are key levers. By equipping the market with knowledge and making quality measurable, we can protect the industry, reduce waste for customers and build a sector that competes globally rather than just locally.

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

Two of the most exciting growth areas linked to stainless steel are the rise of alternative foods and the rapid expansion of cannabis extraction and processing. South Africa is starting to invest more meaningfully in plant based proteins, nutraceuticals, powders and specialised superfood manufacturing, and these products require hygienic, corrosion resistant processing lines. Similarly, since the decriminalisation of cannabis, the sector has grown substantially which increases the demand for high purity extraction facilities, solvent handling systems and specialised stainless steel equipment.

Looking ahead, I believe stainless steel will continue to show strong growth potential in sectors such as renewable energy, advanced food and beverage processing, biotechnology and pharmaceutical manufacturing. These industries require high hygiene standards, chemical resistance and long asset life cycles, which are areas where stainless steel remains the material of choice.

Two employees, four decades and a factory's worth of institutional knowledge

When a technical, family-run specialist like **Duva Chemicals** talks about institutional knowledge, it isn't an abstract asset on a balance sheet, it's the memory held in people's hands, habits, and voices. Two employees, Factory Manager **Lynne Leyds** and Electropolishing Foreman **Sam Masekela**, who have worked at Duva Chemicals since the 1980s, were recently recognised at a staff awards function held at the company's premises in Johannesburg's industrial hub, Chloorkop, Kempton Park.

Lynne and Sam's combined service spans more than eighty years and traces the company's evolution from a compact unit in Wynberg, Johannesburg into an internationally active supplier of stainless-steel pickling, passivation and bespoke chemical plants. Together their stories reveal how craftsmanship, pragmatism and long-term client relationships have kept Duva relevant in a demanding industry.

A legend in the making

Lynne arrived at Duva Chemicals in 1985 after leaving a job in fashion retail. She remembers the early days as "being thrown in at the deep end" a steep learning curve that involved long hours, hands-on problem solving and a strong work ethic.

What began as a production and customer-facing job subsequently expanded into operations management, reception, invoicing and mentoring. Lynne became the person clients called when they needed practical advice or a fast fix. She helped support innovations such as Duva's pickling paste for targeted weld repairs, a game-changer for fabricators who need touch-ups rather than full-immersion treatments.

On site, Lynne starts each day with a "toolbox talk," allocating tasks, checking mixtures and ensuring work meets Duva's exacting standards. Fortunately, she's as

comfortable in the yard as at her desk, a rare combination that has made her both a production leader and a mentor.

Overall, she's proudest of Duva's teamwork and endurance. The business has weathered decades of industrial change, recessions and the Covid-19 pandemic, but she says the secret lies in loyalty and shared responsibility. "We have gone through thick and thin together, but we've stuck by it. For me, Duva isn't just an employer. It's my home."

Decades of dedication

Sam Masekela's connection to Duva began in 1983, when founder John van Duyn started the business. Sam laughs as he remembers his youth: "I was still very young, very naughty," he says. But he learned quickly, working side by side with John. "Everything he did, he called me. Today I want you to do this with me."

That on-the-job apprenticeship became a defining feature of Sam's career. From rubber lining and detergent production in the early days to the company's later move into acids and stainless steel treatment, Sam absorbed each process by doing it himself. He became Duva's first electropolishing foreman and one of its most trusted field technicians.

His proudest moment came in the late 1980s when he was sent to Benin, West Africa, to oversee stainless-steel refurbishment at a brewery. "When I came back, the boss said he didn't need to go check it he knew it was done right," says Sam. That independence, earned through years of hands-on learning, is something he still encourages in younger staff.

Sam's quiet leadership has shaped Duva's reputation far beyond Johannesburg, though he now trains others rather than travelling, his influence runs through every electropolishing job that leaves the factory.

At 63, Sam plans to retire to Limpopo in the next few years, rejoining his wife and family. His advice to the next generation is simple: "Leave your problems at the gate. Focus on your work. The more you work, the less time you have to think about the negatives."

A legacy of loyalty

Duva Chemicals' technical footprint, from electropolishing and on-site pickling and passivation to automated plant design, is impressive. But its real strength lies in people like Lynne and Sam: employees who built careers by treating the business as their own.

They both stress training and attention to detail as non-negotiables. Their advice to younger colleagues can be summed up simply: show up, learn at the bench, respect safety procedures and treat each surface as a client's reputation. In an industry that prizes finish and reliability, those are not soft values they are competitive advantages.

For more on Duva Chemicals products and services go to: **www.duvachem.com**

Grandi Manufacturing's 13-tonne stainless steel sea water filter for Tronox Namakwa Sands

In 2024, Grandi Manufacturing completed one of South Africa's largest stainless steel fabrications, a 13-tonne Sea Water Filter built for Tronox Namakwa Sands on South Africa's West Coast. Designed to operate in one of the most corrosive coastal environments in Southern Africa, the project demonstrates local expertise in precision stainless-steel fabrication and corrosion-resistant engineering.

Project overview

Located near Brand-se-Baai, the Tronox Namakwa Sands operation extracts and processes heavy mineral sands for global markets. A key part of this process is the Slurry Transfer Facilities (STFs) structures that dewater mineral slurry while recovering process water. The Sea Water Filter forms part of this system, enabling the controlled transfer and filtration of saline water.

The project ran over several months, from design through fabrication, inspection, and delivery. All work took place at Grandi Manufacturing's Cape Town facility under the supervision of International Welding Engineer **Robert Lawrence**. The structure comprised several sub-assemblies including large-diameter piping, complex joints, and a ten-metre stainless-steel beam, all built to tight tolerances and supported by full documentation and testing.

Purpose and material selection

The aim was to fabricate a durable, corrosion-resistant filter able to withstand abrasive mineral slurry and the saline coastal climate. Permanently exposed to saltwater and fine particulates, stainless steel offered the only material capable of delivering the required strength and longevity.

Grade 316L stainless steel was chosen for its proven marine performance and low-carbon composition,

which prevents sensitisation and intergranular corrosion essential for welded assemblies in chloride-rich conditions. Its mechanical stability also allowed the structure to handle dynamic loads while maintaining alignment and minimal distortion.

Fabrication detail

All components were laser-cut from 316L plate to control distortion and ensure dimensional accuracy. Plate thickness ranged from 5.5 mm to 10 mm depending on load.

Key elements included:

- Main piping, 275 mm diameter x 10 mm wall x 5 m, extended to 7 m through precision joining.
- A 316L box beam, 400 mm x 400 mm x 5.5 mm, spanning ten metres as the main structural element.

All welding used 316L filler wire with Acral Chrome shielding gas, and welders were qualified to AWS D1.6 Stainless Steel Structural Code. Welding parameters, inter-pass temperatures, and bead geometry were logged in a detailed data pack for traceability.

After welding, all surfaces were pickled and passivated to restore the chromium-rich film essential for corrosion resistance and prepare the surface for long-term coastal exposure.

Engineering challenges and solutions

The project's complexity lay in its scale, precision, and the behaviour of stainless steel under heat. Joining the extruded 316L pipe sections proved difficult due to ovality. Grandi's engineers, led by Owner and Managing Director **Marco Grandi** and Partner **Brandon Ryneveld**, developed a custom jigging system to ensure accurate alignment during welding.

Fabricating the ten-metre box beam to strict tolerances presented another challenge. To prevent distortion, the team developed a plug-welding procedure combined with backstepping short, alternating welds that balanced heat input and stress. The result was exceptional: the beam remained perfectly straight with no measurable distortion after welding.

Comprehensive Dye Penetrant Testing (DPT) was carried out on all critical welds, with 10 percent of remaining joints tested for verification. The project achieved full compliance with internal and client standards.

Sustainability and performance

From an environmental and operational standpoint, the Sea Water Filter highlights the sustainability of stainless steel in coastal industry. Its role to separate, recover, and recycle water from Tronox's mineral slurry supports the operation's water-conservation goals. In a region where freshwater is scarce, reclaiming and reusing process water is vital.

Stainless steel's durability, corrosion resistance, and recyclability ensure decades of service with minimal maintenance. Its use lowers lifecycle costs and environmental impact, removing the need for coatings or frequent replacement proof of its long-term value.

Industry impact and lessons

For South Africa's stainless steel sector, this project marks a milestone in both scale and quality. It shows that local manufacturers have the expertise and infrastructure to deliver complex, high-tolerance stainless structures to international standards.

Key lessons include:

- The importance of distortion control and heat management in large stainless assemblies.
- The value of early collaboration between design, welding, and inspection teams.
- The need for detailed welding documentation to ensure traceability and client confidence.

As **Robert Lawrence**, the overseeing welding engineer, notes: "This fabrication set a new benchmark for stainless steel construction in South Africa. Achieving zero distortion across ten metres of stainless while maintaining full code compliance reflects the exceptional skill and teamwork. "

Conclusion

The Tronox Sea Water Filter is more than a technical success it is a showcase of South African engineering and the enduring value of stainless steel in demanding industrial environments.

Through precise fabrication, disciplined welding, and rigorous quality control, the delivered structure met its purpose and reflects the strength, sustainability, and innovation of the stainless-steel industry.

Marco Grandi, concludes, "This project reflects everything we stand for, namely a precision, collaboration, and a commitment to quality. It's a proud moment not only for our team but for South African manufacturing as a whole."

Beyond the Surface: The Hidden Variables in Electropolishing

A puzzling surface defect on a 304 stainless steel round bar, resulted in a Sassda member having valid concerns over the material quality but a subsequent the investigation by Sassda's Technical Team revealed a different story. The culprit wasn't in the alloy, but in the process. Here's how we traced the problem and what it means for quality assurance in stainless steel finishing...

The case that started it all

A batch of 304 stainless steel round bar emerged from electropolishing with an unexpected matte finish and dull patches breaking up what should have been a bright, reflective surface. There was an initial finding of high carbon content, but independent laboratory tests quickly ruled that out. The carbon level was comfortably below 0.08%, well within the 304 specification limits.

Closer examination showed that the dullness was confined to the outer surface and disappeared completely after light mechanical polishing. When Sassda's technical team reviewed the mill certificate, photographs, and test data, they found no metallurgical concerns or inclusions, carbide precipitation or surface defects.

All signs pointed to a single conclusion: the fault didn't lie in the steel itself, but in the electropolishing process.

Why do we electropolish?

Stainless steel's reputation rests on its corrosion resistance, durability, and cleanability. The standard 2B finish from the mill is more than adequate for most hygienic and industrial uses. But in sectors where every microscopic detail matters, from food and pharmaceuticals to semiconductors and surgical equipment, electropolishing provides the next level of finish.

The process smooths and brightens the metal surface, enhances corrosion resistance by removing embedded iron, and creates an ultra-clean, passive chromium-rich layer. It also improves cleanability, eliminates micro-burrs, and delivers the lustrous appearance often associated with premium stainless steel.

A short history of the process

Electropolishing isn't new. The process was first observed in 1907 when a researcher Buetel, noticed a satin-like finish forming on gold immersed in an acid bath.

By the 1930s, researchers such as Shpitalskiy in Russia and Jacquet in France had refined it into a controllable industrial process.

The real boom came in the 1950s and 60s as stainless steel became the material of choice for hygienic and high-performance industries. With improved rectifiers, temperature controls, and acid management, electropolishing moved from laboratory curiosity to standard practice.

The science behind the shine

In essence, electropolishing is the reverse of electroplating. Instead of depositing metal ions, the process removes them selectively dissolving high points on the surface and leaving a smooth, bright, and passive finish.

A 304 stainless component is connected as the anode in an acid electrolyte (commonly a mix of phosphoric and sulfuric acids) while a direct current passes through the bath. Material removal is controlled by current density, temperature, and exposure time. Even slight changes in any of these parameters can make the difference between a mirror-bright surface and a dull, uneven one.

Material or method?

Not all dull finishes stem from poor processing sometimes the material itself is at fault. Common metallurgical factors that can affect electropolishing include:

- **Non-metallic inclusions** (often sulphides in free-machining grades like 303) that dissolve unevenly.
- **Carbide precipitation** caused by improper annealing, producing patchy lustre or “orange peel.”
- **Surface decarburization** during heat treatment, altering the surface chemistry.
- **Residual cold work** from machining or rolling, introducing stress zones that resist uniform polishing.

But in this case, none of these were present. Metallurgical analysis confirmed the batch met all specifications. That left one conclusion: **the cause was process-related.**

Where electropolishing goes wrong

Electropolishing success depends on the delicate interplay of chemistry, current, and time.

The most common process issues include:

- **Electrolyte degradation:** Over time, acid strength drops and dissolved metal ions build up, altering current flow and causing cloudy or etched finishes.
- **Incorrect current density:** Too low produces dullness; too high causes pitting or “burning.” The sweet spot for 304 stainless is 10–25 A/dm².
- **Contaminated surfaces:** Oils, oxides, or residues from machining interfere with uniform dissolution. Thorough pre-cleaning degreasing, ultrasonic cleaning, and acid pickling is essential.
- **Over-polishing:** Leaving parts in the bath too long can attack grain boundaries and create a hazy film.
- **Poor rinsing or drying:** Hard water or contaminated rinse tanks can deposit residues that dull the finish.

Troubleshooting the finish

Once the material has been verified as compliant, attention must turn to the process line. A systematic approach helps pinpoint the issue:

1. **Check the electrolyte:** Analyse acid ratios, contamination, and metal iron buildup. Replace or refresh as needed.
2. **Verify current and temperature control:** Calibrate the rectifier and ensure stable current density within the optimal range.
3. **Audit pre-cleaning steps:** Confirm consistent use of degreasers and acid pickling to remove contaminants.
4. **Control cycle times:** Limit exposure to 30 seconds–2 minutes depending on part geometry.
5. **Inspect rinsing and drying:** Use only deionized water and dry in a clean, controlled environment.

If the problem persists, surface microscopy can help reveal etching patterns or signs of contamination, providing vital clues to the root cause. For long-term reliability, every batch should have traceable records electrolyte condition, current settings, operator logs, and inspection results. Preventive control beats post-process correction every time.

Setting the standard

Several international standards govern electropolishing practices and surface quality requirements. The most relevant include:

- **ISO 15730:** Electropolishing for smoothing and passivating stainless steel.
- **ASTM B912:** Standard electropolishing specification for stainless steels.

- **ASTM A967:** Chemical passivation treatments for stainless steel parts.
- **ASTM F86:** Surface preparation for metallic surgical implants.
- **ASME BPE:** Bioprocessing equipment surface finish and cleanability criteria.
- **SEMI F19:** Surface condition specifications for wetted stainless steel components.

These standards outline key process parameters, inspection methods, and surface finish targets. Adherence to them ensures both consistency and compliance in critical applications.

Lessons learned

This investigation confirmed what experienced metallurgists already know: when electropolishing results fall short, the material is rarely to blame.

The 304 stainless steel in question fully met specification. The dull finish was the product of process drift, a reminder that even a small lapse in control can tarnish an otherwise flawless material.

The takeaway for stainless steel finishers and users is simple:

- Maintain chemistry and current balance.
- Keep pre-cleaning thorough and consistent.
- Use pure rinse water.
- Record and monitor every batch.

Electropolishing rewards precision and punishes complacency.

The final polish

In the end, the 304 round bar was cleared of any metallurgical blame. The root cause was identified within the process a powerful reminder that achieving a flawless shine in stainless steel is as much about discipline as it is about design.

When stainless steel loses its lustre, the solution isn't to question the alloy it's to refine the process.

To find out more about Sassda's Technical Consulting Service or log a request for assistance e-mail **michel@sassda.co.za**

Ethiopia: Building Power, Prosperity and a New National Future

From hydro dams to gold mines, Ethiopia's massive infrastructure drive is opening doors for global suppliers, fabricators and stainless steel specialists across Africa.

Ethiopia, officially the Federal Democratic Republic of Ethiopia, is fast becoming one of Africa's most dynamic construction and industrial markets. With a population of almost 135 million, second only to Nigeria, the Horn of Africa nation is leveraging its vast human capital and natural resources to reshape its economy.

Known for a history that stretches back over 2 000 years, Ethiopia is now firmly focused on the future. Its government has embarked on a string of mega projects in energy, transport, mining and urban renewal, collectively valued at more than 30 billion US dollars. The goal is clear: to industrialise, modernise and secure self-sufficiency in energy and infrastructure.

Despite hurdles such as inflation, poverty and the lingering effects of a 2023 debt default, the country is pushing ahead with wide-ranging reforms backed by the IMF and World Bank. For investors, fabricators and material suppliers, Ethiopia represents both a challenge and an extraordinary opportunity.

Powering Progress: From Hydropower to Nuclear Ambition

In September 2025, Prime Minister **Abiy Ahmed** announced an ambitious new wave of projects, including the nation's first nuclear power plant. The announcement came as Ethiopians celebrated the completion of the Grand Ethiopian Renaissance Dam (GERD), the largest hydroelectric dam in Africa, with a capacity of 6 450 megawatts.

Funded entirely by public contributions over 14 years, the GERD is a symbol of Ethiopian pride and self-reliance. Built using local materials wherever possible, it also created significant demand for structural and corrosion-resistant metals. For the stainless steel sector, such mega projects highlight a long-term opportunity in supplying durable materials for water handling systems, turbine housings, spillway gates and transmission infrastructure.

"The GERD was our generation's proving ground," said Prime Minister Abiy. "Now, we must look forward – to build, to innovate and to power our prosperity."

Ethiopia's planned nuclear plant, said to rival the GERD in scale, represents a major step in diversifying the country's energy sources. Stainless steel and specialist alloys are expected to play a critical role in reactor construction, piping and containment systems; areas where high corrosion resistance and performance under pressure are essential.

"Ethiopia is not just lighting homes, it is building the backbone of Africa's green industrial revolution."

Hydropower and Wind: Expanding the Green Grid

Beyond the GERD, Ethiopia's renewable energy expansion continues at pace. The Koisha Hydropower Project, now 70 per cent complete, will generate 1 800 MW and produce more than 6 400 GWh of electricity annually when finished. Its 201 metre high dam structure is one of the largest civil engineering undertakings in the nation's history.

Similarly, the Aysha II Wind Farm is nearing completion. Valued at 257-Million US dollars, it adds 120 MW to Ethiopia's grid, with the first 80 MW already online. Despite financing delays, Ethiopian Electric Power has pressed ahead, sourcing turbines, towers and mechanical components that rely heavily on stainless steel for longevity and minimal maintenance.

These initiatives form part of a ten year, 40-Billion US dollar renewable energy plan encompassing 71 projects. The aim is to double generation capacity and export clean electricity across East Africa, a vision that offers vast scope for industrial materials and fabrication expertise.

Mining and Manufacturing Momentum

While power generation dominates headlines, Ethiopia's mining sector is gaining equal traction. The Tulu Kapi Gold Project has secured 240-Million US dollars in financing from the Africa Finance Corporation and the Trade and Development Bank. Once operational in 2027, it will produce around 164 000 ounces of gold per year.

Mining infrastructure, from processing plants to pipelines, depends on high-performance materials capable of withstanding abrasion and corrosion, a strong fit for stainless steel fabricators. The same applies to the Kurmuk Gold Project, due to start production in 2026 with a capacity of 200 000 ounces annually.

Downstream, these developments will also support local manufacturing. Ethiopia's industrial parks, such as those in Hawassa and Dire Dawa, are expanding their focus from textiles to light engineering and metal fabrication, signalling a future demand for stainless steel in machinery, food processing, and construction applications.

Transport and Trade: Linking Landlocked Ethiopia to the World

Connectivity remains central to Ethiopia's growth. The Addis Ababa–Djibouti Railway, stretching 759 kilometres to the Red Sea port, handles more than 95 per cent of Ethiopia's import and export trade. Upgrades to this electrified route are underway, supported by a 1.72-Billion US dollar World Bank loan that also covers electricity expansion, water infrastructure and rural road improvement.

Ethiopia's air transport sector is similarly ambitious. The government has announced plans for a new international airport capable of handling 60 million passengers a year making it Africa's largest aviation hub. Such infrastructure offers potential for stainless steel use across terminals, catering facilities, air-handling systems and structural design, reflecting a growing appetite for durable, low-maintenance materials.

Urban Transformation: Addis Ababa Reinvented

Addis Ababa is undergoing a visible transformation under Mayor **Adanech Abebe**. Redevelopment projects include new housing, green spaces, pedestrian walkways and modern infrastructure designed to attract foreign investment.

However, the process has drawn criticism over the relocation of informal settlements, raising questions about inclusivity. Fortunately, for the construction sector, the city's shift towards green urban spaces opens a strong market for architectural stainless steel in façades, railings, street furniture and water systems.

The Materials Behind the Vision

Ethiopia's transformation is creating ripple effects across Africa's metals and manufacturing supply chains. Hydropower and wind farms require miles of stainless steel piping, turbine components and support structures. Mining and processing plants rely on corrosion-resistant steel for conveyors, tanks and chemical containment. Urban infrastructure demands high-grade alloys for hygiene, strength and longevity.

For stainless steel producers and fabricators, Ethiopia represents a long-term growth frontier. Local fabrication capacity remains limited, opening opportunities for regional partnerships, technology transfer and training. With sustained support from international financiers and multilateral institutions, the next decade could see Ethiopia emerge as one of the continent's largest markets for industrial materials and engineering services.

Looking Ahead

Ethiopia's GDP is expected to reach around 109-Billion US dollars in 2025, and its reform agenda is gathering momentum. However, challenges persist including inflation, foreign debt and regional tensions but the country's infrastructure-led growth strategy remains strong.

For the stainless steel industry, this is a nation to watch. Its drive for renewable power, modern cities and industrial capacity is underpinned by materials that endure, and stainless steel is t the core of that future.

Trading Smarter: Why Currency Control Is Key to Stainless Steel Success

As global markets shift and exchange rate volatility continues to bite, South African stainless steel producers and fabricators face increasing pressure to manage their international transactions more effectively. Whether it's importing raw material or exporting finished product, fluctuations in currency and cross-border payment delays can have a direct impact on profitability and competitiveness.

That's why the arrival of BeztForex as a new Sassda member comes at an opportune time, not simply as another financial services provider, but as part of a growing conversation about how the sector can improve its approach to international trade, foreign exchange (FX), and cross-border compliance.

Strategic Trading

For many in the stainless steel value chain, currency exposure has long been treated as a necessary cost of doing business rather than a strategic consideration. Importers face uncertainty in their landed costs when rates swing unexpectedly, while exporters can lose margin between quoting for an order and receiving payment.

As stainless steel prices remain sensitive to global commodity cycles, these currency movements can amplify market pressures. The impact is particularly felt by small and medium manufacturers, who often lack access to specialist guidance or competitive forex structures.

At a recent Sassda Business Breakfast Executive Director **Michel Basson** highlighted the importance of "bridging financial and operational expertise" across the association's network, particularly when it comes to helping members become more resilient and globally competitive. The inclusion of companies like BeztForex aligns with that broader intent.

Who Is BeztForex and Why They Joined Sassda

BeztForex was established in 2012 with the aim of offering more agile and adaptive forex services to businesses trading internationally. The company has since grown from a small partnership into a national operation, with around 3 000 clients across multiple industries.

For BeztForex Partner **Kevin Burke**, joining Sassda was a natural step back into a familiar space as he has been associated with the stainless steel industry since the late 1980s through his earlier work with Middelburg Steel & Alloys and Econometrix.

"I've seen how sensitive the sector is to pricing shifts and how much difference timing and rate efficiency can make. Our aim isn't to sell a service but to contribute expertise that helps members trade more confidently and sustainably," he says.

In practice, that means helping Sassda members, particularly importers and exporters, understand their forex exposure, structure their transactions efficiently, and ensure Reserve Bank applications are handled correctly and quickly

Breaking Down Barriers to African Trade

As South Africa positions itself within the African Continental Free Trade Area (AfCFTA), the ability to move money safely and predictably across borders is becoming a key enabler of growth.

For stainless steel businesses looking north, into markets like Zambia, Kenya, or Nigeria, access to liquidity, local currency restrictions, and regulatory bottlenecks remain constant challenges. BeztForex's experience in African trade gives Sassda members an additional knowledge partner who can help demystify these practical obstacles.

More broadly, Sassda sees this kind of expertise as part of a bigger puzzle: enabling members to compete on more than just material and manufacturing capability. The ability to manage financial flows effectively, minimise friction, and secure payments quickly are now equally important success factors.

Addressing the Human and Technical Gap

Across industry, there is growing concern that forex management has become overly automated and depersonalised. Many companies are left navigating call centres or generic online systems, with little understanding of how to mitigate risk or make informed timing decisions.

BeztForex COO **Danica Bezuidenhout** argues that this lack of hands-on service often costs businesses more in the long run not just in rates, but in lost opportunity and administrative delays. "Our model combines technology with personal guidance through a dedicated portfolio manager, which may prove useful to smaller Sassda members without in-house forex departments," she explains.

However, the company is careful to frame its role as complementary rather than competitive. Its function is to support clients, by handling the groundwork and ensuring all SARB and compliance elements are correctly in place before funds are transacted.

Knowledge Sharing and Skills Development

One of the practical commitments BeztForex has made to Sassda is to share knowledge rather than only offer services. The company will be contributing regular commentary, analysis, and educational content for distribution through Sassda's channels, covering topics such as global currency trends, trade risk management, and the regulatory landscape around foreign exchange.

Plans are also underway to host member workshops and online sessions on issues such as grey listing, short-term trade insurance, and understanding financial surveillance procedures. These will be provided at no charge and tailored to the realities of the stainless steel trade environment.
The intent, according to Bezuidenhout, is to make international finance "less intimidating and more accessible," particularly for businesses that may be new to exporting or expanding into new markets.

Looking Ahead: Collaboration for Competitiveness

As Sassda continues to strengthen its member network through cross-sector partnerships, financial intermediaries like BeztForex have an important role to play in unlocking new efficiencies.

By simplifying forex processes, clarifying compliance, and promoting cost transparency, such partnerships can reduce barriers to trade-freeing stainless steel producers and fabricators to focus on what they do best: innovation, production, and market growth.
BeztForex's national digital model and its collaborative approach make it well positioned to support Sassda's vision of a more connected, competitive, and opportunity-driven stainless steel ecosystem.

"We're excited to be part of an industry association that values collaboration. If we can help members trade more effectively, particularly as Africa's markets open up. That's a win for the whole value chain," says Bezuidenhout.
As the industry continues to navigate global uncertainty, partnerships that merge financial acumen with industrial insight may well prove to be the quiet enablers of South Africa's next growth chapter.

*For more information e-mail kevin@beztforex.co.za or call: +27 82 573 032.

Quick Insight: Five Common Forex Challenges for Stainless Steel Exporters and Importers

1. **Currency Volatility** - Rapid fluctuations in the rand against major trading currencies can quickly erode margin, especially for companies quoting prices weeks or months in advance. Many SMEs underestimate the value of forward cover or rate-fixing strategies to protect profitability.

2. **Hidden Transaction Costs** - Not all exchange rates are created equal. Small variations in bank spreads, handling fees, and payment delays can add up to significant losses over a financial year. Transparency in pricing remains a key issue, particularly for smaller firms.

3. **Delays in Regulatory Approval** - South African Reserve Bank (SARB) applications for international payments or foreign investments can slow transactions when documentation is incomplete or incorrectly structured. Working with specialists who understand SARB protocols can save time and avoid penalties.

4. **Limited Access to African Currencies** - Trading within Africa often means dealing with liquidity shortages or currency controls in partner countries. This can complicate settlements, extend payment timelines, or even halt supply chains. Proactive planning and local partnerships are essential.

5. **Lack of Internal Expertise** - Many manufacturers still manage foreign exchange reactively rather than strategically. Without a clear risk framework or access to financial guidance, decisions are made under pressure, often costing more than necessary. Building financial literacy at all levels of the business can change that

Sassda Positions Stainless Steel for Growth via Johannesburg Energy Storage Summit

Sassda recently attended the 2025 Energy Storage Summit Africa, held in Sandton, Johannesburg, reinforcing its strategic commitment to identifying emerging opportunities for the stainless steel industry.

Across South Africa and the wider continent, the sector is gaining traction as utilities, industries, and municipalities seek ways to stabilise electricity supply, integrate renewable energy, and improve overall energy resilience. For a country facing power reliability challenges, large-scale battery energy storage projects are now seen as essential to ensuring grid stability and supporting economic growth. Sassda Market Intelligence Specialist **Tebogo Nkwe** shared valuable insights from the event, particularly from a panel discussion on "Leadership for Energy Security: From Risk to Resilience." She noted that true leadership in energy security requires more than risk management. It demands a bold vision for resilience, built on foresight, collaboration, and innovation.

"One of the key takeaways is that we shouldn't frame the debate as renewables versus coal. Instead, South Africa needs to build a versatile energy mix that combines renewables, nuclear and other sources, to ensure we remain competitive and resilient."

Tebogo adds that South Africa's evolving energy market calls for greater policy clarity and cooperation between industry, regulators, and utilities. "Businesses need to prepare for market reform, explore embedded generation and storage, understand CBAM's impact on competitiveness, and move toward cost-reflective tariffs and competitive procurement," she says.

Reflecting on the Summit overall, she commented, "Energy-storage solutions are building a new infrastructure landscape, and stainless steel must be part of that fabric if South Africa is to manufacture and supply smart, resilient components."

At the forefront of the energy transition

For Sassda and its members, the Summit provided a valuable opportunity to stay at the forefront of these developments and ensure that the stainless steel industry remains aligned with the conversations shaping Africa's clean-energy transition. Stainless steel already plays a vital role in this field from constructing durable enclosures and support structures for battery systems to manufacturing tanks, piping, and components used in hydrogen, flow, and thermal storage technologies.

Globally, demand for high-integrity materials in energy storage applications is expanding fast. Systems must withstand temperature fluctuations, corrosion, and demanding operational conditions all areas where stainless steel offers unmatched performance and longevity. As South Africa continues to localise parts of the energy-storage value chain, domestic producers, fabricators, and suppliers stand to benefit from new industrial and infrastructure requirements.

To maximise these opportunities, Sassda is encouraging members to:

- Review product offerings to align with the fast-growing storage sector, particularly in enclosures, racks, tanks, and piping systems.
- Build partnerships with energy-storage developers, EPCs, and manufacturers who require corrosion-resistant, locally sourced components.
- Monitor upcoming projects and tenders in both public and private sectors to position stainless steel solutions early in the procurement process.

Sassda's participation in the Johannesburg Energy Storage Summit forms part of a broader effort to connect the local stainless steel industry with markets of the future. As energy storage infrastructure expands across Africa, stainless steel's durability, sustainability, and versatility will ensure it remains a material of choice for a cleaner, more resilient energy future.

Industry Relationships Take Center Stage at Gauteng Sports Day

Sassda recently held its annual Gauteng Sports Day at Johannesburg's picturesque Bryanston Country Club, offering members and partners a valuable opportunity to connect in an informal yet purposeful setting..

The day attracted strong participation, with 112 golfers taking to the course. A total of 10 holes were sponsored, including nine drinks holes, which provided well-positioned points for interaction and brand visibility throughout the event. The relaxed format encouraged conversation and networking among professionals from across the stainless steel supply chain, helping to strengthen existing relationships and open new channels for collaboration.

In addition to golf, this year's event included a padel tournament, where 20 players competed in a parallel sporting programme. The inclusion of padel reflected Sassda's ongoing effort to create a diverse and engaging environment that accommodates varied interests while maintaining a focus on professional networking.

The day concluded with a networking dinner attended by 150 guests, where participants continued discussions in a more structured setting. The evening provided space for reflection on shared industry challenges and opportunities, as well as the chance to reinforce connections made during the day's activities.

Overall, the event achieved its objective of combining sport, interaction, and industry engagement in a balanced way. The setting provided a neutral and productive environment for members to exchange ideas, discuss market developments, and identify areas of mutual interest.

The Sassda Gauteng Sports Day remains a key date on the association's annual calendar, valued for its role in maintaining close professional networks within the stainless steel sector. It continues to serve as a reminder that business relationships are strengthened not only through formal meetings and projects, but also through shared experiences that encourage collaboration and trust.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