

stainless^{steel}

the journal of the southern africa stainless steel development association



DECEMBER 2021

LOCALISATION HAS HUGE POTENTIAL FOR SA HOLLOWWARE



3CR12 - NEW SOLUTIONS TO AGE OLD PROBLEMS

CHAMPIONING WOMEN IN STAINLESS

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SASSDA ROSE TO THE CHALLENGE IN 2021 & WON

When this article was written for the Stainless Steel Magazine issue in April 2021, we referred to this second year of the COVID-19 pandemic, as the year of living bravely. At that stage, as we entered 2021, the Sassda Team had started to seek perspective on the previous twelve months, and we held a 'team debrief' to assess the changes

the previous year had wrought on our industry.

It was clear that Sassda had to remain committed to becoming an even more flexible and agile, industry-relevant association that furthered its goal of growing stainless steel demand locally and adding value to our members' bottom line in a variety of ways.

The main objectives for 2021 were therefore to improve on what we were doing well and enhance the services rendered to not only the stainless steel industry but the industrial and manufacturing sectors in general. After all, that was part of Sassda's commitment to the Steel Master Plan.

ENHANCED OFFERINGS

To achieve this, three brand new workshops were designed and accredited for CPD value to professionals in the Architectural, Mining and Water industries. Our Fundamentals of Stainless Steel course was also CPD accredited for mechanical engineers and the frequency of the presentation of this course has been increased from four regional presentations a year, to five national events during 2021. Our educational reach has therefore grown exponentially this year.

However, the future for our industry

not only resides in training. Sassda has the mandate of increasing locally converted stainless steel and this can only be done by readying members for new markets, identifying those new markets and bringing them closer to our members.

Our bi-weekly webinars play a major role in this. The topics for these events range from technical, business-orientated sessions assisting members with export readiness, the details of the African Free Trade Agreement and detailed market intelligence type information with a special focus on African growth markets. We did not only attract impressive numbers of members to these services but also non-members from all kinds of industries and market sectors.

We are also busy building ties between members and retailing groups, through the Steel Master Plan, to localise the manufacturing of products in the catering and hollowware sector.

As we approach the end of the year at a rapid rate, we are looking at the figures

and statistics that would indicate our activity and achievements for 2021. From what we hoped to achieve earlier this year; given all kinds of new challenges in the world of stainless steel and our local environment, we are happy and satisfied that Sassda has been able to deliver good value to our members and industry during the past months. This has also been the feedback from a members survey that was conducted during the year.

However, this is no time for resting on our laurels. We are already working on improving our level of service delivery and benefits for members in 2022 and we are tenacious in our belief that we will make a difference in the greater picture of South Africa's socio-economic future. Read in this edition how we plan to do some of that next year.

From Sassda management and staff, we would like to wish you a peaceful rest period over the upcoming holidays and that the coming year will offer more opportunities than challenges.



When it comes to the ins and outs of stainless steel, we deliver solutions



CORROSION RESISTANT MATERIALS AND SOLUTIONS

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STATE OF THE STAINLESS STEEL NATION

In its most recent reports, the ISSF indicates that the global growth of the use of stainless steel has maintained historic levels of 5.68% (compound annual growth).

The compound growth figures of major metals up to 2020 show that stainless steel remains the fastest growing metal with aluminium its closest rival. The sustainability of stainless steel in terms of Life Cycle Costing, recyclability and its general low impact on the environment is showing value in the latest figures.

Interestingly, the forecast for cold rolled flat products remains smooth given the COVID-19 pandemic's influence on production and demand in the first quarter of 2020.

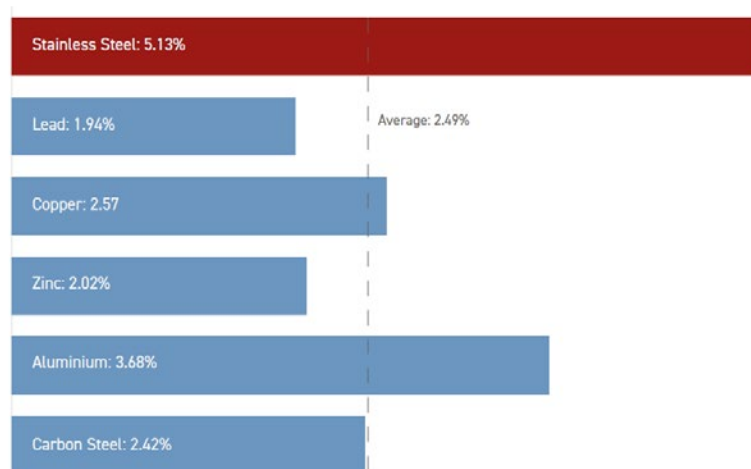
However, the hot-rolled global forecast indicates an outlook with large fluctuations. Long products show a similar trend cold rolled products. As a result, the forecast for all products appears below average with the impact of the hot rolled fluctuations visible in its effect.

The hygienic properties and cleanability of stainless steel are also becoming more important with the renewed requirements for sanitisation as a result of the pandemic. This shows that a modern world cannot function without stainless steel whether in private residences, public spaces, or industry.

Stainless steel is truly a modern material for modern society with a 100-year track record in unbeatable service to humanity.

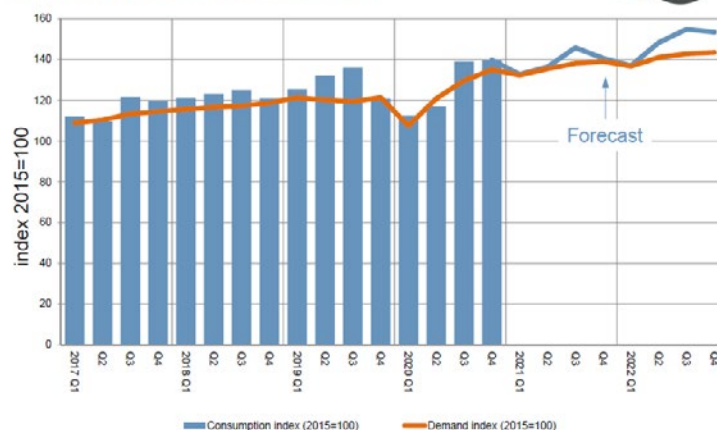
Sassda statistics for the local market is shown on the next page for the period October 2019 to September 2020 vs. October 2020 to September 2021.

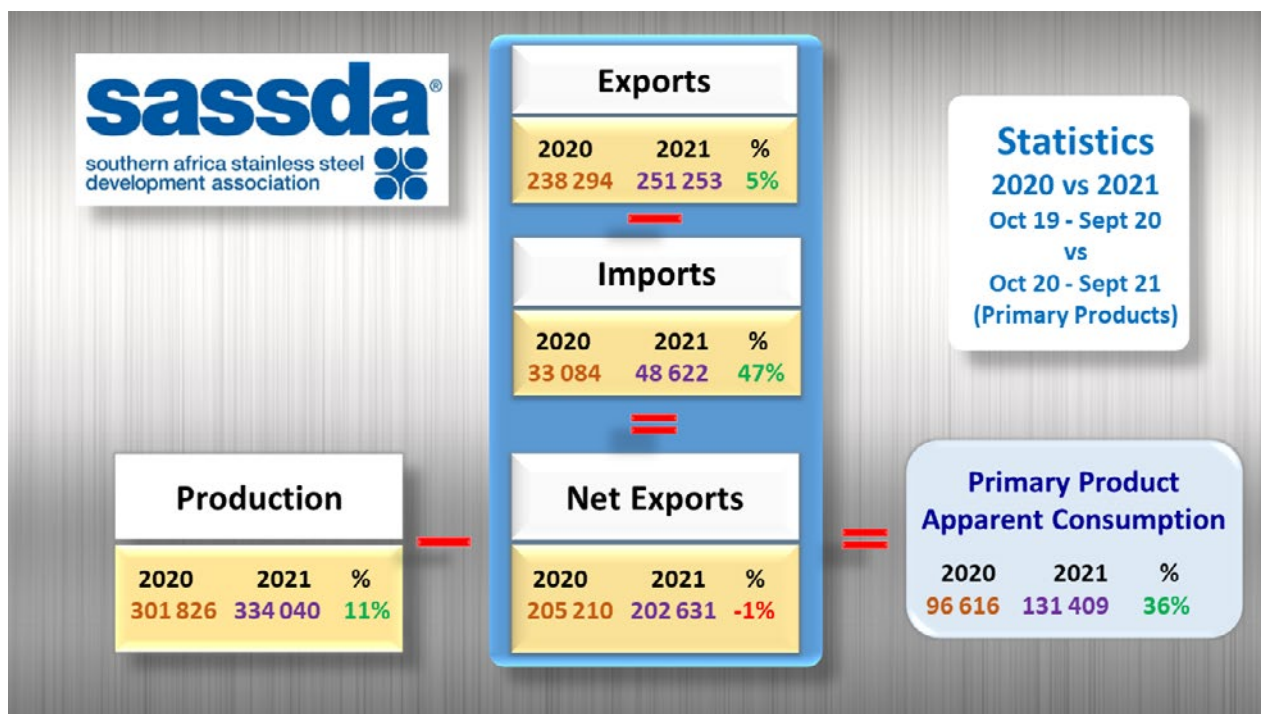
An increase in local production, imports, and exports. This results in a growth in apparent local consumption of 36%. This is a sign of



Global consolidation

Stainless steel cold rolled flat product consumption index and demand index development [2015=100]





COVID delayed projects gaining traction and new work surfacing. Stainless steel is employed in sometimes critical applications and projects in these applications will continue.

On the coal face of South African fabrication of stainless steel projects, industry sentiment reflects the 'roller coaster ride' of the past two years.

The confidence levels of Sassda members sharply increased from the low (25%) levels recorded a year ago to a confidence level around 60% for the past three months. The decline in

member confidence over the last two or three months can be ascribed to the impact of social unrest, strikes and uncertainty about electricity supply. However, our industry has a track record of being innovative and resilient and we believe that the new year will bring new hope.

To this end, Sassda will continue doing its best to provide opportunities for assistance, learning and marketing of your company as the most active stainless steel association globally. Simply Brilliant!





As part of its aim of remaining relevant and forward thinking, Sassda has reassessed its performance during two collaborative strategic sessions with the Sassda Team and Main Committee members in attendance. The session proved extremely successful at identifying wins and losses during the last 12-months and clearly showed the most agile and effective path forward. Here Sassda Acting Executive Director **Michel Basson** provides an overview of what was achieved

Management literature defines a strategy as “a general direction set for a company and its various components to achieve a desired state in the future”. Re-visiting a strategy from time to time is good practice, especially in a fast developing world where (as seen in the last two years) the general environment for business and living can change within weeks.

In the current state of the globe, it would be unwise to make five year or longer strategic plans. The ability to survive unforeseen calamities stems from an organisation’s ability to adapt

and thrive. The level of adaptability shown by organisations during chaotic interventions is not only a sign of their chances of surviving but also the level of organisational intelligence. In short, clever organisations learn how to adapt and survive.

At the end of 2018, Sassda embarked on a new funding model, and it was time to investigate the success of our Tiered Membership system in terms of income generation through membership and the ability to offer members value for money benefits and services. In 2021 a strategic task team was formed by Sassda staff and members to structure a scientific and accurate way to conduct a study to answer these questions.

MEMBER-DRIVEN & TRANSPARENT

A strategic session was held in September 2021 with the Main Committee and Board to evaluate the research findings and how to approach the next 12 to 18

months. Sassda is a member-driven and transparent organisation, and we would like to share with you some of the detail of the strategic session.

Most important is that the members confirmed Sassda's mandate namely that the Association provides a platform for Sassda members to collectively promote the sustainable growth and development of the industry with the main emphasis on stainless steel converted within the South African economy.

The session highlighted the following key phrases in the mandate, namely: "promote"; "sustainable"; "industry growth and development", and "conversion of stainless steel within the local economy". It was also confirmed that the strategic pillars for future development and focus will remain:

- Marketing of Stainless Steel
- Education and Training
- Safeguarding the Industry
- Raise Sassda's Profile
- Member Engagement

Before the session, the Sassda team conducted a competitive review in terms of membership costs and services rendered when compared to other stainless steel development associations globally. What this showed, is that Sassda delivers the same generic features as the other associations but is unique in the following Services and Products:

TECHNICAL SERVICE

- Welding Brochure
- Guide for Architects, Consulting Engineers and Quantity Surveyors
- Stainless Steel Maintenance in and Around the Home
- Weekly Webinars
- Sassda YouTube Channel

EDUCATION AND TRAINING

- eLearning Introduction course
- Shop floor Warehouse course

- Shop floor Fabrication course
- Advanced course
- CPD presentation to architectural institutes
- "60 Minutes" type webinar

MARKETING YOUR BUSINESS AND GENERATING LEADS

- Life Cycle Costing
- Outward bound trade missions with the dtic
- Trade shows with the dtic
- Monthly Africa Country Report
- Influencing and Networking
- Short Track Survey
- Strong Government interaction and lobbying

A questionnaire showed that most members are satisfied that the current Sassda membership fee is in line with the value received. We will therefore continue our current path of delivering improved membership benefits with no membership fee increase during 2022.

For more details on the revised benefits, we will also be emailing out a digital snapshot of all the added value services we currently offer to ensure our members can easily identify these value add opportunities for their business

For further enquiries on our current membership offerings please email michel@sassda.co.za

SASSDA PILLARS FOR DEVELOPMENT AND FUTURE FOCUS



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

1. STEEL MASTER PLAN NEEDS REFINING IF IT IS TO HELP REVIVE DOWNSTREAM INDUSTRY

Duferco MD Ludovico Sanges argues that the Steel Master Plan is a good start, but that certain key issues still need to be addressed if the embattled downstream steel industry is to be revived. The Steel Industry Master Plan was signed on June 11, 2021, with the laudable aim of revitalising the country's ailing downstream steel industry which turns "raw" steel into products. The concept of a master plan has considerable merit, especially when it comes to saving a critical strategic industry, but important issues need to be resolved in order to make it a success.

[READ MORE](#)



2. POSITIVE RESULTS FOR 3D PRINTED DUPLEX CONNECTORS

Large-scale 3D metal printing company MX3D has successfully produced a structural connector in duplex stainless steel, designed in collaboration with engineers from Takenaka, one of the largest architecture, engineering, and construction firms in Japan. This project demonstrated the progress in producing highly customised and engineered steel connectors using robotic 3D metal printing, i.e. Wire Arc Additive Manufacturing (WAAM). Destructive and non-destructive testing on a series of printed duplex steel connectors shows a strong and consistent performance of mechanical and material properties. The successful tests are a crucial step towards certification of the structural connector, which parties intend to use for innovative building projects.

[READ MORE](#)





5. R500M UPGRADE FOR PINETOWN PACKAGING PLANT

A project with potential for stainless steel usage...Tetra Pak has announced a R500-million upgrade of its packaging material factory in Pinetown, KwaZulu-Natal. Factory Director Waqas Ali said the work would take place over several years, starting in the first quarter of 2022 and increase the production capability to the benefit of sectors in the liquid food industry value chain. Stefan Fageräng (pictured), Managing Director of Tetra Pak South Africa said while the investment was primarily a business decision, "it cannot be ignored that it also represents a timeous morale booster in the KwaZulu-Natal province and South Africa".

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3. SA EXPLORES INNOVATIVE SOLUTIONS TO WATER CHALLENGES

Water and sanitation minister Senzo Mchunu has urged the Water Research Commission to continue addressing water quantity and quality challenges through innovation and new technologies. A prime example of this type of approach to 21st Century water challenges is stainless steel water pipes. Mchunu has called on stakeholders in the water sector to rally behind ensuring that water supply exceeds demand. Mchunu made the call while addressing the fifth Water Research Commission Symposium held earlier this week. He said the ongoing drought that continues to be experienced in some parts of the country and the COVID-19 pandemic, have exacerbated water and sanitation challenges.

[READ MORE](#)



4. THE POSSIBILITIES OF WIRE MESH IN ARCHITECTURAL FACADES

From creating a new parking structure with an awe-inspiring aesthetic to retrofitting an existing building, architectural wire mesh provides versatility and durability which makes it unique from other design material options. Commonly referred to as "wire cloth" or "wire fabric" this versatile metal product can be used effectively in countless applications. Popular uses for wire mesh include steel wire mesh partitions, wire mesh for building facades, and PVC wire mesh for machine guards.

[READ MORE](#)



6. SOUTH AFRICA'S NEW SMART CITIES: A ROADMAP FOR TRANSFORMING ALL OUR CITIES

In 2019, President Cyril Ramaphosa shared his dream for a new South African city that would be "driven by smart technologies of the fourth industrial revolution". The ultimate purpose of South Africa's new smart cities is more sustainable, inclusive and socio-economically relevant urban development. But the president's vision of what "smart technology" can do for all stakeholders involved, especially those in the stainless steel sector in these specific developments, can also be a reality for every existing city in South Africa. Everyone – from local and provincial governments to commercial entities and citizens – can benefit from their cities becoming smarter. Ultimately, a smart city is a manifestation of sustainable urbanisation in action.

[READ MORE](#)

women in stainless

SASSDA BOOSTS FEMALE PARTICIPATION IN THE STAINLESS STEEL ECONOMY



The world is entering a new era of female empowerment. Where women are at the helm; they are the ‘captains of industry’, the moguls, industrialists and tycoons.

In line with this, government has plans to roll out a National Strategic Plan, consisting of six pillars of which one, aims to ensure women’s economic and financial inclusion as part of a broader localisation drive. This will fuel a critically needed agenda that paves the way towards gender equality,

poverty eradication, sustainability and inclusive economic growth.

President Ramaphosa has said “We are going to drive women’s economic inclusion through public procurement. We have set the target of ensuring that 40% of goods and services procured by public entities are procured from women-owned business”.

A Women’s Economic Assembly (WECONA) has therefore been created with the focus on finding “supply chain opportunities for women-owned

“Women are the largest untapped reservoir of talent in the world” -

Hillary Clinton

businesses in key industries such as steel, automotive and energy sectors”, stated President Ramaphosa.

COLLABORATING FOR SUSTAINABLE SOLUTIONS

As a result, Sassda has been working with government to find opportunities for female-led companies within their membership and contribute to creating equality for women in all spheres of their industry and broader economy. Sassda has approximately 25 female entrepreneurial members and their main role will be “support and input on the steel sector” for the National Strategic Plan.

Sassda Market Intelligence Specialist **Lesley Squires** who was invited to speak at the WECONA launch, says the initiative was formed as part of the localisation effort amongst government organisations and the assembly will facilitate this.

“It’s vital to have initiatives like the WECONA to dispel the misconceptions about manufacturing and steel industries being only for men. By forging positive visibility of women in industries where they form the minority, it will inspire and motivate young women to do anything they set their minds to do.

“Women must be educated about the many opportunities and types of jobs in the manufacturing and stainless steel industry. Sassda will be assisting them in getting the right qualifications necessary to fill these positions,” she explains.

FEMALE-LED MEMBERS ARE SHAPING THE INDUSTRY

Sassda member **Albis Flanges** is a family-owned business run by founder Oswald Haas’s daughters Monika Lupini and Sonja Walls since 2017. For more than 25 years, Monika worked in the construction industry with her husband and Sonja worked in the exhibition industry, which is dominated by women leaders, thereby instilling an attitude that leadership is not based on gender.

Sonja states; “Previously, male dominated industries are in a state of



transformation and re-imagining which is exciting and it is critical to educate and empower women for the future of these industries”.

She believes it is vital to have women leaders in the steel industry,

“Traditionally, the manufacturing and steel industry has been dominated by men. From an early age, boys were encouraged into these industries, by society, culture, parents and the educational system. It is a classic case of

gender stereotyping, that women were not suited or have the aptitude for these industries.

“This is not true, and it is important that through transformation, to instil a sense of confidence in women, that no industry is off limits. We need to create an environment that is diverse and inclusive, not based on gender, but based on capabilities, skills and potential, value systems and having the right attitude and work ethics. By having more female leaders, it will encourage young women to enter into the industry”.

A MORE STRATEGIC ROLE TO PLAY

[BBD Steel Supplies](#) is spearheaded by partners **Monika Pretorius** and Gwendolyn Mahuma both of whom have a passion to empower other women and we find it very gratifying to see other women succeed in business.

Gwendolyn comments that it is important for strategic female involvement in most sectors including the stainless steel industry. “Currently, there are not enough women players in the industry and the scenario must be changed. Women are an available and abundant resource that could be a pool of talent to be utilised.

“Women will bring diversity and a new way of thinking to any male dominated industry. Women also tend to be more empathetic to issues related to the environment, social and health and, going forward for any organisation to be sustainable, these cannot be ignored”.

Gwendolyn maintains that in the stainless steel industry, women are mostly found in traditional roles such as administration, accounting etc. It is rare to find women in the manufacturing, distribution of stainless steel and other steel-related products. Lately, women are starting to play leadership or strategic roles in this industry but the numbers remain low”.

She adds that “stainless steel is a volume business and without the right support it will be difficult to succeed. Steel is also a technical environment. Women should be encouraged at the tertiary level to study engineering-related studies to build industry



knowledge and to enable them to compete. Companies should also be inspired to offer artisan opportunities that also include women to build real skills amongst the women, giving them the ability to get access to technical jobs as well as entrepreneurial advantages in the sector”.

“There are many opportunities in the downstream industries. Women can get involved in the manufacturing of stainless steel products, women can become wholesalers and distributors of stainless steel. However, to succeed they will need financial as well as non-financial assistance (such as access to market) to become meaningful players”, concludes Gwendolyn.

WOMEN FOR WOMEN

Executive director at Tocoblox Development Consultancy and key WECONA stakeholder **Phelisa Nkomo** wants to activate public and private sector supply value chains that are gender responsive, diverse, capable and sustainable, enabling businesswomen to identify entry points and opportunities for viable economic engagement. She hopes to bring together all necessary

stakeholders to “contribute to a movement of economic emancipation for all women of South Africa and build a long term framework where economic opportunities for women nationally are leveraged, well understood and articulated in line with the supply chain ecosystems within various sectors”.

According to Phelisa, we must “create an effective platform for social dialogue and commitment making, development of action plans, and social contracting about a gender responsive economy in South Africa; thus forging a partnership between government, women in business and business organisations”.

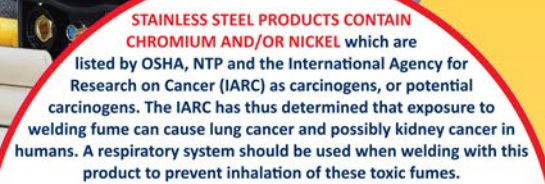
All the more reason for this long overdue and much needed initiative to take off.

CLICK
HERE

to watch Sassda Market Intelligence Specialist Lesley Squires’ speech at the launch of the Women’s Economic Assembly.

CLICK
HERE

to read the full speech



Integrated Stainless Steel *Solutions*





LOCALISATION HAS POTENTIAL FOR FAR REACHING BENEFITS

The South African Stainless Steel Development Association (Sassda) is playing a vital role in developing downstream opportunities for the local holloware sector as part of its key stakeholder representation role in the development of the government's Steel Master Plan.

The plan has seen the dtic focusing on developing opportunities for stainless steel, and prioritising the localisation of products. This has been wrought with challenges in sourcing products from abroad, thereby increasing the need for localising the manufacturing of stainless steel products.

Sassda Market Intelligence specialist Lesley Squires reports; "When the Steel Master Plan was first released last year, the stainless steel subsector received recognition for its work and the potential it offers the steel industry.

"Earlier this year we were approached by the dtic, who requested our assistance in helping local retail organisations to localise the manufacturing of their stainless steel consumer ware goods"

Sassda's role in the plan is aligned with its mandate, to promote the growth of the local conversion of stainless steel to the benefit of our members, industry, and the country.

"Although there are a substantial number of stainless steel consumer goods available in the market, it was decided to put our focus into specific product types initially, with a view to sourcing from local manufacturers and ascertaining if the local pricing was acceptable to the clients." She said some of the reasons for the retail sector

looking at localisation are increased logistic costs, delays and closures of ports in the Far East, due to COVID-19, amongst others."

WORK WITH MAJOR RETAILERS

Delving deeper into its current work for stainless steel and holloware manufacturers and distributors Squires reports; "Earlier this year we were approached by the dtic, who requested our assistance in helping

local retail organisations to localise the manufacturing of their stainless steel consumerware goods.

“The dtic facilitated contact with the Massmart Group and the project got underway. After Massmart, we were joined in this endeavour by Shoprite/Checkers, the Lewis Group and Elite Star Trading Africa - a grouping of smaller retail outlets in the Cape.”

Squires elaborates; “Holloware includes fabricated products such as pots, pans, cutlery and other similar utensils. We are therefore working with four major retailers to meet their specifications and align them with our members so that they can fabricate these products locally. Since it takes a while to identify product specifications and design, these products will only be available in the second quarter of next year.”

CHAMPIONING STAINLESS STEEL IN THE STEEL MASTER PLAN

Looking ahead, labour and industry stakeholders are forging ahead with the establishment of the stainless steel section of the Steel Master Plan, while government is facilitating the process. Squires reports; “There are numerous opportunities for increasing local demand for stainless steel products by creating demand for locally produced hollowware through discussions with local retailers.”

“The required capacity from local stainless steel fabricators to meet this demand for hollowware does exist and there is enough capacity. What we need to do, is to buy and support South African-produced products. To achieve this there should be an aggressive drive on a united front,” Squires concludes. Sassda was a key partner at this year’s Manufacturing Indaba where the message from Department of Trade, Industry and Competition (dtic) Minister Ebrahim Patel was very clear. “We are on the cusp of great renewal in local manufacturing that can drive increased output and competitiveness, what we call re-industrialisation.”

At this leading manufacturing event in Sub-Saharan Africa, the focus was on the incredible role in what the South



“Government puts its weight behind localisation”

African manufacturing sector can play in the development of the renewable energy sector including opportunities such as electric vehicles.

POSITIVE OUTCOMES

There have been many positive manufacturing projects and initiatives rolled out across the continent according to Minister Patel. They have been in the pharmaceutical sector with a variety of product lines, the Dube Trade Port in eThekweni has opportunities for fuel-cell production and commitments by global auto manufacturers such as Ford Motor Company and Mercedes Benz.

Minister Patel warned, however, that individual firms may inflate their prices as they prepare for localisation opportunities and asked businesses to invest in ways to improve the competitiveness and dynamism of local firms.

“The government has now introduced reciprocal commitments attached to tariff increases or rebates of duties, which include commitments by affected firms not to raise prices,” said Minister Patel.



case study

STAINLESS STEEL CREATES SUPERIOR LIFESPAN FOR PUBLIC TRANSPORT BUSESSES



Sassda honorary member **Don Maxwell** has spent a lifetime championing stainless steel especially when it comes to its role in the growth of the local economy. Here he presents a fascinating Case Study on the role 3CR12 stainless steel played in creating a far superior life span for Golden Arrow buses which are a key part of transporting millions of commuters each day, and which could well be applied to other forms of public transport infrastructure in South Africa...

Before the introduction of Grade 3CR12 stainless steel to the Golden Arrow Bus Services fleet, bus bodies were made of mild steel. According to retired Company Engineer Roger Overton, bus bodies made from

mild steel were not durable at all, and rust was an endemic problem.

In fact, the “mild steel problem” only grew in magnitude with no solution in sight. “We had even resorted to permanently removing inner panels



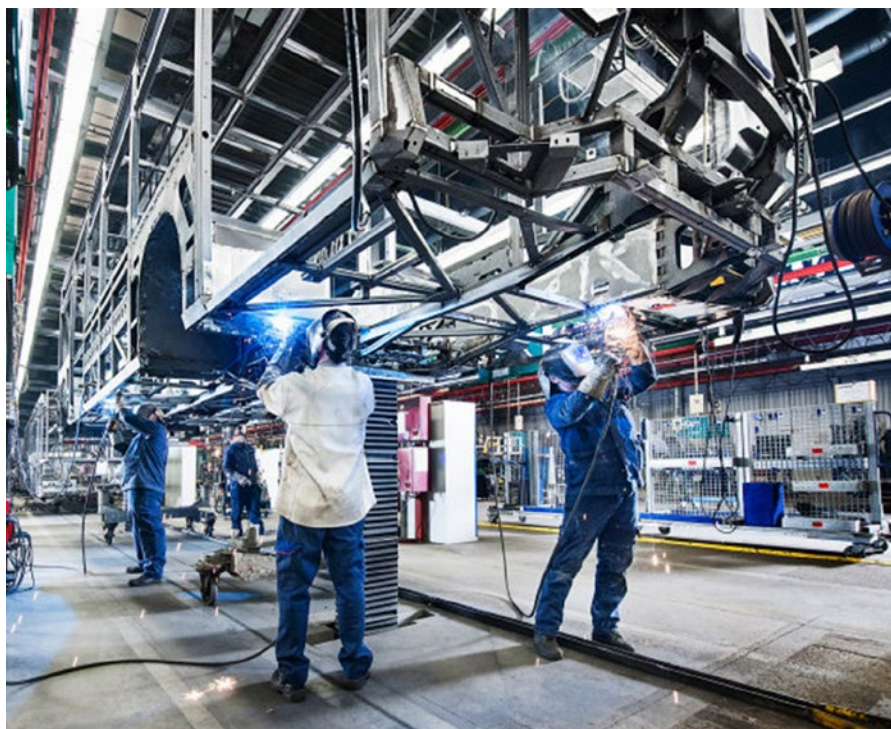
on buses so that repairs could be made more easily,” Overton says.

The issue became so serious that the last double decker buses were removed from service because the condition of the mild steel was so poor that it did not meet the Company’s stringent safety standards. The mild steel was not only unsightly and extremely expensive to maintain but had become a safety issue.

Overton recalls that he first came across 3CR12 at bus manufacturing plant BUSAF. “They were building double decker buses at BUSAF and only the side frame to roof section was available in 3CR12 at that time. It was becoming clear that this new development could be a game changer from early on and as more sections became available, we started to make use of them,” he said. Senior management at the time was relieved that a solution had been found and fully supported the move away from mild steel.

Retired Body Shop Supervisor Jamiel Adams recalls how Golden Arrow began to build its own 3CR12 bus bodies at its Central Engineering Complex in Epping. “We built close to 100 3CR12 bodies – this was the start of our 2400 bus series, and we also tested it on Leyland MKI and MKII’s and ERF bus bodies,” he said. The result was an unbelievable reduction in missed trips as buses were no longer laid up in the Body Shop continuously for major structural work.

When Golden Arrow began its long-standing relationship with MAN,



Overton insisted that 3CR12 was used despite this not being their standard material of choice. It proved to be a wise decision as Adams and Overton recall that a 3CR12 MAN bus which was manufactured in 2000 was stripped in 2010 with no rust to be found anywhere. This durability is also evident in the 16-18 year old buses that the Company was recently able to sell.

The introduction of Grade 3CR12 stainless steel, therefore, proved to be a real turning point for the company in many ways. The quality of our buses improved significantly, its rust resistance eliminated the treatment, paint and remedial work needed for mild steel bus bodies and ultimately resulted in sizeable cost savings.





3CR12 OFFERS NEW SOLUTIONS TO AGE-OLD APPLICATIONS

Early humans made a breakthrough when the making and controlling of fire was invented. This was critical, not only for security and warmth but also provided new ways of preparing food. Since then, cooking has developed into a global industry and, as we all know, stainless steel plays an inherent part in this industry.

However, the original cooking style developed by early men is still very popular in the shape of what we know as a braai. Especially in South Africa where nearly every household has an area for fire making and cooking on coals or flame. We also find that virtually all participants in the art of braaiing have a design for the ultimate braai and finding the best design often leads to 'heated' arguments!

A METAL THAT KEEPS ITS COOL WHEN HOT

In the US there is also a trend towards portable camping braais and 4x4 enthusiasts in Texas seems to be very impressed by the latest South African braai export. This homegrown innovation is manufactured by a local entrepreneur and is made from another South African innovation, 3CR12 stainless steel.

The product is designed to last a lifetime with a 100-year lifespan and creates a quality culinary experience. While the durability of 3CR12 is well known, this design makes use of 4.5mm thick 3CR12 material which is necessary to ensure even heat distribution throughout the cooking surface of the pan.

Thinner gauge pans often result in "hot spots" on the cooking surface leading to burning, and an unpleasant cooking experience, whereas stainless steel has a low level of thermal conductivity. 3CR12 also offers excellent strength retention and corrosion

resistance at these high temperatures. A bonus is that this pan is strong enough to be inverted and could even be used as a base plate for a hi-lift jack when the owner gets his or her 4x4 vehicle stuck in sand!

The 3CR12 braai design also features a vertical rack for holding pans and grids above the coals, a stainless steel grid with a foldable handle and a grilling pan made from 4.5mm 3CR12. The cooking utensils are suspended with friction and can hold a weight of 100kg should you wish to grill something of that size! Ideal for Texans!



FARMING

After inventing the controlled use of fire, humans moved on from being hunter gatherers and began domesticating animals and also learnt to start to grow crops.

This was the first human effort to ensure food security. Since then, farmers and gardeners have struggled to keep weeds out of the crops.

In modern times this has been achieved with chemical solutions, but this approach also brought negative factors such as environmental impacts and the influence of these chemicals on human quality of life.

Globally, there is also a strong movement back to a more organic way of farming with less impact on the environment.

At the wine farm Babylonstoren near Paarl in the Cape Winelands, a more environmentally friendly approach is being made possible with the use of stainless steel implements to farm the estate's 3.5-hectare kitchen garden, which is modelled on the famous



Company's Garden in Cape Town.

In this garden, weeds are removed by traditional stirrup hoes. What is not so traditional, is that each of these hoes is completely made from 3CR12 and cleverly designed to have no welds. The swivel action of the blade makes

it surprisingly easy to use, making weeding as easy as mopping a floor. The blade is self-cleaning and wear-resistant since it is made of 'workhorse like' stainless steel! Old problem - new approach - Simply Brilliant!



professional profile

A LIFETIME OF DEDICATION



The greatest strength of the South African stainless steel sector is undoubtedly its people, who believe in the material's ability to enhance and sustain the South African economy no matter how onerous the challenges it faces. For this reason, our profile series focuses on stainless professionals who embody the entrepreneurial spirit and who will shape our industry for years to come. In this issue, we speak to Wire Products Stainless Steel Director Tanya Papadopoulos

What was your path to forging a career in the South African stainless steel sector?

I have no formal post school degree. I started in this industry at the age of 21 and it was not long after that, my interest in this industry grew. With the help of my predecessors, I was trained in different fields throughout my years at the company. I have been with the company for over 30 years and it is with my experience, initiative and dedication that I have succeeded in my current position. I look at this as an advantage where experience is what comes down to understanding the industry. What attracts me about this industry is that there are continuous opportunities for growth and I look forward to seeing what other markets are explored as well as the innovation that will develop.

How and when did you then enter the stainless steel industry?

I started with Wire Products Stainless Steel in January 1990.

How did the first years of your level of experience in a real-world setting? What were the key lessons you learnt during this time?

The first few years of my career were spent developing my skills in various departments. This exposed me to how things are run on a day to day, real world basis. Due to my interest in the industry and my ambition for growth, I completed a number of short courses. I always believed that one of the key elements to my success was time management, especially since I was a young mother with a family. Being a young woman and a mother in this industry can have its challenges, but I consider myself a driven person and I have overcome many obstacles and dedicated myself to my career.

How would you describe a typical day in your current position?

My day starts with a walk through the production factory, discussions with the Plant Manager, sales team, and warehouse, as well as with the accounts department, I have a great team and tremendous support from them which makes communication and day to day functions streamlined.

Why do you feel that stainless steel has such an important role to play in getting South Africa's economy back on track following the COVID-19 pandemic?

Stainless steel has for many years been used for its corrosion resistance and strength. Its benefits are not something new, however, the use of Stainless Steel in the South African economy going forward can be very versatile. For example, the generation of power in its various forms - coal, wind, gas, nuclear, solar, hydro or sea will require cooling stations and

water flow. Stainless steel has the corrosion resistance, long life and strength needed for these types of hard working, high pressure environments.

I believe that using various sources to generate power is key to seeing the local economy recover. Water desalination plants to manufacture water from the sea is also a possibility for the future of South Africa and will require stainless steel piping and water management. There are also the mining and agriculture industries that require water management and therefore stainless steel will have to play its role in sustaining the equipment and systems.

Other industries that rely on stainless steel include Petrochemical plants – Sasol/ Total in SADAC states, around South Africa play a huge role in South African economy, and will do, for years to come; there is also the food and beverage industry in South Africa which requires stainless steel for its hygiene benefits and corrosion resistance.

Let's also keep in mind that the South African geographic and topographic characteristics alone demand corrosion resistance and strength in its infrastructure. All these various industries and developments will play an important role in assisting South Africa to recover economically and financially and stainless steel is a key part of their processes. Our local manufacturing capacity around stainless steel wire filler materials and round bars is critical in contributing to the build projects post COVID-19 in South Africa. Stainless steel manufacturing will also contribute enormously to other infrastructure building projects.

What do you consider as the most exciting innovation/product developments happening in stainless steel right now and what sectors hold the greatest potential

for the use of stainless steel in the future?

As mentioned above the power generation sector in all its possible forms will require stainless steel for cooling and water management, and believe will be the largest contributor. Water desalination is also a future that holds huge excitement and potential for South Africa, and running water will become a commodity to be revered and looked after in years to come. Rail transport too is very exciting and will require stainless steel for manufacturing, maintenance and repairs. Mining and agriculture will remain a realistic part of the South African economy and therefore remains an ongoing development.

Aerospace is also showing strength but is at this stage not a large contributor to the economy. However, I'm sure will increase over time. Lastly but not least, South Africa infrastructure as mentioned above, due to our weather and proximity to the ocean, will always require stainless steel for corrosion resistance, strength and decorative properties. What is exciting in South Africa is the companies and our abilities to adapt to our requirements, environments, and our creativity and resilience that continually shows. Stainless steel will consistently play its role therein.

Decarbonising energy generation through solar, wind and other new energy-efficient innovation creates new industry opportunities for the stainless steel sector. The rebuilding of South African water infrastructure of dams will continue to foster sector growth. Traditional rail build programmes, particularly across the continent will create an added pipeline of opportunity, and the use of stainless steel will increase as the discovery of other natural resources, such as gas continue to rise.

SAIW CHAMPIONS TOP QUALITY WELDING SKILLS ACROSS THE CONTINENT



The Southern African Institute of Welding (SAIW) is a champion of the world-class skills, quality levels and productivity output that are all key drivers of a sustainable economic growth plan. In light of this, it aims to develop its existing top quality training and increase South Africa's welding, NDT, inspection (including certified inspectors, IPEs and CPs) and welding coordinator (including the International Welding Practitioner, Specialist and Technologist) skills base.

In line with this, the SAIW is forging a path to boost welding skills across the African continent and has signed an SLA with The African Welding Federation (TWF) of which it is a founding member. Significant to the TWF and SAIW alliance, is a strong focus on ISO 3834 certification, which allows certification bodies to assess a manufacturer's ability

to meet customer and regulatory quality requirements in fusion welding in both workshops and in the field, and further endorses a company's welding employees as competent. It also boosts a manufacturer's ability to sell its products in domestic and international markets.

This type of strategic partnership is a key part of the SAIW's long terms growth plans with Executive Director John Tarboton reporting that 2022 will see the implementation of a bold strategy to bolster the SAIW's practical welding school. "Many students come through our doors who have attended other training institutions but have found it difficult to embark on a rewarding and lucrative career due to the level of their skills being insufficient for local and foreign projects. This is something we rectify with our training courses and which is so essential, as certified welders,

under the International Institute of Welders qualification program, have a huge role to play in rebuilding our economy."

A STUDENT-CENTRIC PROSPECTUS

With this in mind, the SAIW has also launched its new-look [2022 Course Prospectus](#) which is more user friendly and career orientated than ever before. SAIW Executive Director **John Tarboton** explains; "We have designed the 2022 Prospectus as a career guide rather than a course guide. In line with this, we have made a conscious effort to simplify the write-ups on the welding section as simple and clear as possible, while still providing a full overview of the courses we offer.

"In addition, we have included a decision tree style infographic and a Career Roadmap which unpacks how courses and experience equip students for real world careers.

Overall, the Prospectus forms part of a key growth strategy for the SAIW in 2022 starting in its practical welding school. We are therefore putting a programme together combining open days with bursary opportunities to promote awareness of the value of our NDT and IIW welding coordination programmes."

For further information contact:
john.tarboton@saiw.co.za

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SAIW

Southern African Institute of Welding

Contact SAIW on (011) 298 2100 or visit www.saiw.co.za

\$60-BILLION MOZAMBIQUE OIL & GAS PROJECT BACK IN BUSINESS

Mozambique presents an excellent opportunity for the local supply of stainless steel into various ventures that form part of the \$60-Billion oil and gas projects. Unfortunately, the project was halted in the first half of 2021 due to Islamist militant insurgencies in the far north of the country, in the provinces where the gas projects were located...

Mozambique's gas and oil fields have long been touted as a fertile breeding ground for new business opportunities in the form of project participation for South Africa stainless steel manufacturers, distributors, and fabricators.

The good news is that despite the stalling of this project due to insurgency

attacks, Italian energy services group Saipem SPMI.MI has now said it expects a major LNG project in Mozambique to restart around mid-2022 after it was put on hold this year for safety reasons. This follows French energy Group Total declaring a force majeure on its \$20 billion liquefied natural gas project in Mozambique Late in April 2021 following insurgent attacks.

PROJECT UPDATES

The front-end engineering design for the Beluluane Gas Company liquefied

natural gas import terminal project - being developed by Southern African energy group Gigajoule, French energy multinational TotalEnergies, and Mozambican natural gas distributor Matola Gas Company (MGC) is also complete, adding another key milestone to the project. Mozambique's state-owned gas company ENH, a shareholder in both MGC and Rompco - the gas pipeline that runs from Mozambique to the industrial heartland of South Africa - has a share in the project.

The project will meet the growing energy demand in both Mozambique and South Africa by utilising MGCs existing gas pipeline network that will be upgraded to increase its capacity to supply the full capacity of Rompco ensuring natural gas is available for industries and power generation projects.

Gigajoule CEO Jurie Swart explains that the Government of Mozambique awarded the LNG import concession to BGC and approved the construction of a new, 28-inch pipeline linking the terminal to the existing MGC transmission network two years ago,

after years of pre-feasibility studies. The concession includes the operation of a permanently moored floating storage regasification unit (FSRU), marine infrastructure, and a new high-pressure gas pipeline.

The project is critical for energy security in the region. There is insufficient natural gas to meet the current demand for market growth and the power generation needs in Southern Africa, which is set to worsen as output from the Pande and Temane gas fields start to decline within the next three to five years. This shortage has been worsened by the urgent need

A LOOK BACK & CURRENT CONTEXT...

In the first half of the second millennium A.D., northern Mozambican port towns were frequented by traders from Somalia, Ethiopia, Egypt, Arabia, Persia, and India. The Portuguese were able to wrestle much of the coastal trade from Arab Muslims.

Portugal did not relinquish control of Mozambique until 1975. Following that, large-scale emigration, economic dependence on South Africa, a severe drought, and a prolonged civil war hindered the country's development until the mid-1990s.

The ruling Front for the Liberation of Mozambique (FRELIMO) party formally abandoned Marxism in 1989, and a new constitution the following year provided for multiparty elections and a free market economy.

An UN-negotiated peace agreement between FRELIMO and rebel Mozambique National Resistance (RENAMO) forces ended the fighting in 1992. In 2004, Mozambique underwent a delicate transition as Joaquim CHISSANO stepped down after 18 years in office.

His elected successor, Armando GUEBUZA, served two terms and then passed executive power to Filipe NYUSI in 2015. RENAMO's residual armed forces intermittently engaged in a low-level insurgency after 2012, but a late December 2016 ceasefire eventually led to the two sides signing a comprehensive peace deal in August 2019.

In October 2019, election results were challenged by Western observers and civil society as being problematic, resulting in resounding wins for NYUSI and FRELIMO across the country. Since October 2017, violent extremists - an official ISIS media outlet recognised as ISIS's network in Mozambique for the first time in June 2019 - have been conducting attacks against civilians and security services in the northern province of Cabo Delgado.





to transition away from coal as a fuel source and to complement the volatility of renewables.

GAS INFRASTRUCTURE

The gas infrastructure will connect the FSRU to a new 2000 MW gas-fired power plant in Matola, Mozambique, which is well situated on the Southern African grid and able to supply industries with cleaner, dispatchable power at a market competitive tariff.

The project includes an onshore LNG Truck Loading Facility (TLF) capable of supplying customers by road transport who are not situated close to the pipeline distribution network. Preliminary studies show that the TLF can compete with alternative fuels for gas transported up to 1 000 km from Matola.

A final investment decision is expected in mid-2022, depending on the level of off-take secured at that stage. The FEED has now been completed and approved; final environmental reports compiled; and all development processes, licenses, and approvals are on track, while commercial engagements with the market have already kicked off with first commitments signed," remarks Swart.

Finally, he stresses that there has been no impact on the project as a result of the unrest in the north of Mozambique, explaining that the BGC terminal will be supplied from TotalEnergies' global LNG portfolio,



meaning that there will be no supply challenges once the LNG terminal is online. The project to drill the six wells which will feed the Floating Liquefied Natural Gas Platform in Area 4, in the deep waters of the Rovuma Basin, Cabo Delgado, is in its final stages.

With liquefied natural gas (LNG) expected to grow exponentially over the next five years, owing to the global drive to greener power generation, diverse consulting service provider Synergy Oil & Gas Consulting & Training senior energy manager Ismaeel Fataar says now is the time to upskill workers to keep up with international skills and technological developments.

"South Africa currently relies heavily on Mozambique for the supply of LNG, but with training and the correct infrastructure developments in the sector, South Africa can attain supply independence."



Using LNG, which is a clean, cost-effective and readily available product, will help South Africa's efforts at a just energy transition, he adds. However, Fataar mentions that the LNG industry is new and has no concrete standards and accreditations, which "needs to be reviewed.

(Sources: Reuters and Engineering News)

[**READ MORE...**](#)

A large shark is seen through the metal bars of a cage underwater. The water is blue and filled with many small fish. The cage's metal structure is prominent in the foreground, creating a grid-like pattern over the shark.

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