THE LINK

INDUSTRY NEWS FROM THE STEEL VALUE CHAIN

ISSUE 3
Steel Awards 2023

Brought to you by
The Southern African
Institute of Steel Construction

SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

Steel Awards 2023

Explore all the Projects

Winners, Commendations and Nominations

Steel Awards 2023
Sponsors

THE LINK STEEL AWARDS 2023

Strength & Beyond UNICA IRON & STEEL

Main Event Sponsor

MACSTEEL® Pursuing Reinvention

Pan-African Trailblazer Category Sponsor

BSi STEEL Forging Partnerships

Factory, Warehouse and Metal Cladding Category Sponsor

STEWARTS & LLOYDS

Light Steel Frame Buildings Category Sponsor

njr steel first for steel

Innovation and Sustainability Category Sponsor

ASTPM

Tubular Steel Category Sponsor

B & E D Est. 1983

Table Decor Sponsor

ISILO STEEL

Photo Booth Sponsor

C. Steinweg Group

Beverage Sponsor

Contact us

The Southern African Institute of Steel Construction (SAISC) has tirelessly served the industry since its inception in 1956. Our mission is to promote the use of steel in construction and contribute to the health and wealth of the industry for the good of all role players. We are respected as an association for our authority, technical knowledge, and position as the voice, champion and custodian of the steel construction sector.

You can call us on +27 11 726 6111 or email us at info@saisc.co.za or visit www.saisc.co.za

Cover Photo
Mpumalanga Fresh Produce Market

Contents

THE LINK
STEEL AWARDS 2023

Cladding Industry News

Featuring SAISC members Global Roofing Solutions, Macsteel and Bolt and Engineering

Trend Design Lab, 22 Holt Street Sandton

Global Roofing Solutions: delivering the exceptional - and taking it to new heights

Global Roofing Solutions (GRS) excels at innovation devising swift and safe roofing, cladding and decking solutions, exceeding the expectations of project developers, architects, engineers, and other customers across a broad cross-section of industry: from the commercial, industrial, and warehousing sectors to mining, agriculture, and residential housing.

Stronger than ever

Established in 1958, and delivering unique products and services which have defined - and continue to define - the local roofing sector, GRS has emerged stronger than ever from business and pandemic-related challenges in 2020. The award-winning manufacturer has a footprint of 11 branches across South Africa, Namibia and Botswana, providing clients with an extensive range of high-quality products.

Quality, integrity and industry 'firsts'

Andrew Winter, CEO
Global Roofing Solutions

Commenting on the company's upward business trajectory CEO Andrew Winter highlights how its 65-year track record of innovation, quality, and integrity has positioned GRS as a sector leader. The business was borne out of two iconic South African roofing brands - Brownbuilt and HH Robertson - making it one of the largest metal roofing manufacturers in South Africa.

"As leaders in world-class roofing, decking and cladding solutions, Global Roofing Solutions has a proud history as the trusted South African roofing brand. We are also known as dynamic innovators of a locally-researched and developed product portfolio - featuring many industry 'firsts'.

More recently, the business has overcome many challenges emerging in a stronger-than-ever position with the support of loyal customers and staff – as well as third party investors – thanks to whom we are now firmly on our current, dynamic growth trajectory," Winter explains.

Guaranteed product quality

Chief Operating Officer Gert Dercksen says what has made the business a top brand is its specialised technical expertise, which enables it to engage in research and development to provide high-quality solutions, at the right price, for every roofing, cladding, and decking requirement in the industry.

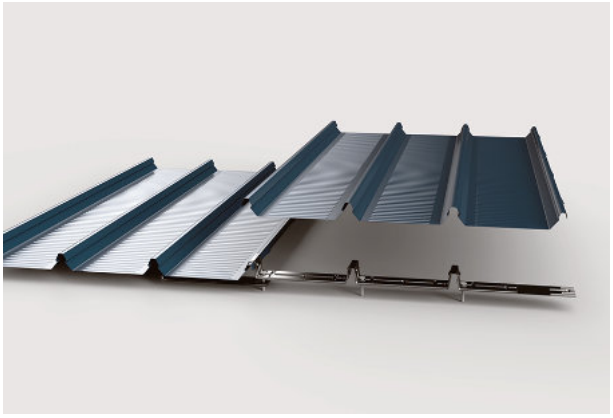
"We were among the first to issue product and installation guarantees to customers, provided products are installed by

Shoprite Cilmor distribution centre

GRS-approved contractors who meet our quality standards and specifications. We have a proud history of quality and stand by our guarantees, without question," he points out.

Innovating for customers' peace of mind

Head of Business Development Johan van der Westhuizen says customers favour GRS's four flagship products: Klip-Tite, Bond-Dek, Bond-Lok and QC Flooring Solutions, because of their value for money, quality, and safety features. "Our Klip-Tite products are distinctive transverse pan stiffeners, providing superior wind uplift resistance as the pans are prevented from bowing upwards - remaining flat when storm winds blow over the roof. This ensures water run-off capacity is not affected," he explains.



The Klip-Tite distinctive transverse pan stiffener

Time Square Casino

Furthermore, robust mobile mills produce roof sheeting on site, elevating it to roof height, and thereby ensuring fast and effective installation.

He adds that because Bond-Dek, Bond-Lok and QC Flooring are permanent shuttering composite steel flooring systems, the need for temporary formwork is eliminated, providing for fast and simple, cost saving construction.

“Bond-Dek’s 900 mm wide panel width and unique side-lap interlocking ensures the fastest erection speed of all steel decking products. QC flooring’s soffit forms the finished ceiling without the need for plastering - again saving time and labour costs. All three products are also fire-tested by the CSIR and qualified for a rating of 120 minutes,” he explains.

The Orion multifunctional roof ventilator is also a widely-used product - a smoke and heat exhaust ventilation system designed to extract smoke from the interior of a building through automatically operated, roof-mounted ventilators. It provides daily ventilation, and acts as a natural smoke exhaust in case of fire, meets the EN 1201-2 EU standard and is CE- (Conformité Européenne) certified.

Growing with our partners

Winter adds that GRS highly values the trust it has shared with its staff, customers and industry professionals over the years.

“We thank all our employees, customers, suppliers and shareholders for their unwavering faith in our expertise and ability to ‘***deliver the exceptional***’. We look forward to enjoying a mutually beneficial and successful partnership moving forward, upholding the highest standards of quality and integrity in our professional services to the construction industry,” Winter concludes.

Trend Design Lab, 22 Holt Street Sandton

Global Roofing Solutions: Leading the way with industry ‘firsts’

1964
Introduced first Brownbuilt concealed fixed roofing profile in South Africa

1969
Produced the first embossing feature on sheeting

1977
First Brownbuilt mobile mill introduced to produce sheets on site

1980
Bond-Lok composite decking introduced

1988
High yield ductile steel profile Klip-Lok 406 introduced

1997
Wide cover Klip-Lok 700 launched

2013
Introduced latest technology Klip-Tite profile

2016
Launched new KL700 Plus Clip for Klip-Tite and Klip-Lok

Macsteel pursues reinvention to ensure relevance, innovation and growth

MACSTEEL®
Pursuing Reinvention

Pursuing reinvention is proving to be a winning formula for growing local business and global export trade says Macsteel CEO Mike Benfield.

Mike Benfield, CEO
Macsteel

Leading manufacturer, merchandiser and distributor of steel and value-added steel products Macsteel consistently pursues reinvention. This is in order to sustainably and successfully provide its customers with high-quality, locally-produced and internationally-sourced steel products and services.

Rich history, broad reach and product range The company has a rich history spanning decades: from its founding in 1904 as National Trading Company and S. Machanick & Co, and its foray into the Middle East and the America's in the early 1970s, to sister company Macsteel International Trading's presence across the world - from South Africa and Australia to the United States - the business is entrenched as a key player in the international steel value chain.

As such, the company – with a footprint extending into Africa - provides a vast array of steel products, including light, medium and heavy profile sections, hot rolled sheet, coil and plate, galvanised sheet and coil, cladding and roofing products to sectors ranging from agriculture and mining to manufacturing and construction.

Challenges and differentiators

Commenting on the challenges facing the steel value chain - and how Macsteel is pursuing reinvention to harness opportunities - Chief Executive Officer Mike Benfield says the industry must adapt, and desist from chasing volumes at the expense of quality.

"For too long the steel sector has been driving down margins because it has been chasing volumes at almost any cost. Many of our competitors have not survived due to this practice - which has also impacted on industry ethics and the quality of products on the market," Benfield comments.

"At Macsteel we do not chase volumes, but rather focus on providing our customers and partners with high-quality locally manufactured or imported products, ethically sourced - at the right price - from our trusted partners worldwide. E-commerce has also helped us to achieve a greater market share as more businesses look online to swiftly find the right steel products that meet all the international quality standards for their projects," he points out.

Extension of credit

"Another differentiator which gives us an edge is that we have an extremely strong balance sheet, enabling us to extend credit to our customers, depending on their project requirements. This places us in a strong supply chain position, as we are able to meet our customers' needs for both quality

Macsteel's Head Office in Lilianton, Boksburg

Novotexi 440® Skyformer
in action at the Pepkor building

products and efficient access to financing solutions – allowing their projects to progress swiftly and with no delays, to meet completion deadlines," he says.

World record

Many of the business's successes have been recognised globally, not least its highly sought-after Sky Forming product, a unique Novotexi 440® concealed-fix profile which clinched Macsteel a Guinness Book of Records 2022 title for the longest roof span covered by a single metal corrugated sheet. The sheet spans 280 m, across the widest part of the roof covering the new Pick n Pay flagship distribution centre in Kempton Park.

"We were delighted to achieve this world record, which highlights that - in pursuing reinvention - we are also partnering with our customers on the journey. Through doing so, we work to understand and supply their requirements, exploring innovative ways to grow our business while enabling our customers' success," Benfield says. New trends driving demand.

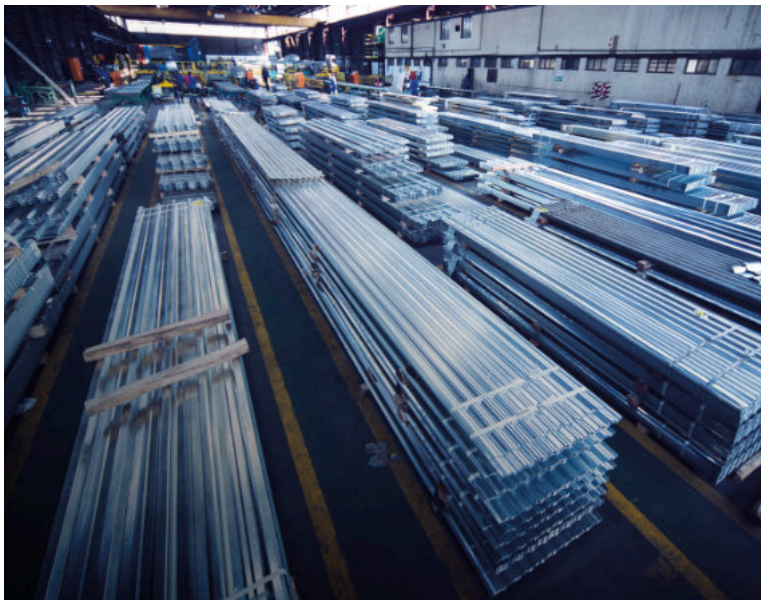
He adds that looking to the future, Macsteel remains committed to exploring new roofing and cladding innovations, such as those that will be in demand as the trend towards photovoltaic (PV) solar roof panels for renewable energy gains momentum.

Value from the SAISC

In addition to being rigorous in its efforts to remain relevant, keep innovating and proactively growing market share – ensuring all activities generate profitable returns – Macsteel has also been a long-term supporter and member of the Southern African Institute of Steel Construction (SAISC). "We strongly believe in its role as custodian and champion of the steel sector. At the same time, it is also imperative for the SAISC to ensure its continued relevance by giving members what they want from a value perspective," he comments.

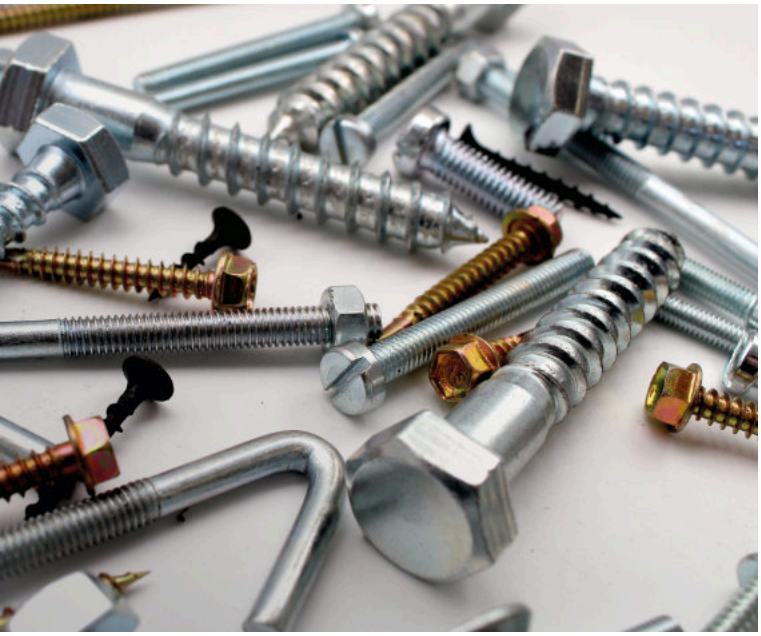
Winds of change

"With well over a century of history in the market we are strongly positioned to partner with our customers and suppliers to meet current and future market challenges head-on, pursuing reinvention to meet evolving global demands for innovative steel products which will weather the uncertain future winds of economic and climate change," Benfield concludes.



Macsteel Corrugated Iron Roof Sheeting also known as Classidek

Bolt and Engineering explains the 'humble' fastener's huge role in creating strong, durable structures and cladding



Range of cladding / roofing fasteners

A far cry from the utilitarian 'boxes' of old, modern buildings are now beautiful architectural statements and brand extensions down to the finest fastening detail. Bolt and Engineering Distributors (B.E.D.) Group CEO Mike Giltrow explains how the company is contributing to meet the rising demand for quality cladding system solutions.

Mike Giltrow, CEO
Bolt and Engineering
Distributors (B.E.D) Group

Buildings and structures of all types – from shopping centres to industrial warehouses – have changed. Cladding is playing more of an aesthetic role than ever – and so too is the 'humble' fastener. Fasteners are extremely important in the construction industry, including in the design and construction of cladding. While fasteners may be regarded by some as a more minor (and therefore less important) cladding requirement, this could not be further from the truth.

Mike Giltrow, CEO of the Bolt and Engineering Distributors Group, explains: "Fasteners must hold the cladding together - and indeed the structure as a whole - thereby ensuring its integrity and longevity, while also playing a critical role in keeping the cladding intact and able to withstand harsh weather elements over time."

The B.E.D. Group is synonymous with safety and quality, enjoying longstanding relationships with its customers and showcasing an impressive portfolio of products from leading global and local suppliers. As such, B.E.D. Bases its operations on trust, integrity, continuous improvement and the '100/0' ethos of taking 100 percent responsibility and accountability - to help customers ***'find the perfect fit, fast'***.

Wide-ranging construction services

Giltrow clarifies that construction projects have varying specifications and requirements with regards to holding together materials in the final designed structure. The use of industrial fasteners - including bolts, nuts, washers, screws and plating - is essential for completion of the structure.

"While nuts and bolts are often overlooked and may not seem important, you cannot hold any structure together without them," he explains. "Likewise, washers are essential in ensuring effective sealing, preventing leakage and water ingress. It is by paying attention to the so-called 'little things' that we take care of the big things, ensuring excellent products, solutions and customer service."

In addition to offering fastener solutions to the industrial steel and construction sectors, B.E.D. also offers bearings, welding and cutting technology; as well as support and repair services.

Aesthetic glass roof with steel frame

Steel panel facade with windows

"B.E.D. has been supplying the construction and engineering industry with quality tools and fasteners since our establishment in 1983," adds Giltrow. "Today, we have many different industrial products – from fasteners to welders and bearings – and a distribution capability which extends throughout South Africa and into sub-Saharan Africa. We are familiar with the role of fasteners throughout the construction process, from the foundations through to the main body of the structure and into the roofing."

Cladding and quality

"Fasteners are tremendously important in keeping cladding robust at all times, and quality is critical. The screws used in cladding must be correct and to the highest standards in protecting the structure, for example against extreme weather conditions such as high wind shear levels, which can potentially lift a roof right off," notes Giltrow.

"However, it should be noted that supplying fasteners and indeed any tooling or equipment based only on price – and not quality – can potentially cause serious construction issues. At B.E.D, we go to great lengths to ensure that we are compliant at all times – safety and quality in this regard is absolutely critical."

B.E.D. and the SAISC

Giltrow says B.E.D. is very pleased to be a member of the SAISC, and was excited to return as a sponsor of the annual SAISC Steel Awards in 2022, having played this supporting role in previous years also.

"The local steel industry and value chain is an important economic contributor, as well as improving people's lives through construction and infrastructure projects. B.E.D. Is passionate about structural work - including the overall aesthetics of the finished building - where cladding plays an important role," he enthuses.

"With the approach of 'it's our business to know your business', B.E.D. is here at all times to cater to the steel and construction sector's fastener, tooling, bearings and welding equipment requirements, with a turnkey supply for the foundations all the way to the roof. We are able to assist in keeping your materials of construction cut, welded, fastened and working as they should!" he concludes.

(L-R) Vivienne Fouche, writer at Kendal Hunt Communications, Mike Giltrow, CEO at Bolt and Engineering Distributors Group, Kendal Hunt, Owner and MD of Kendal Hunt Communications, Amanuel Gebremeskel, CEO SAISC and Denise Sherman, SAISC Marketing and Management Consultant

SAISC's digital revolution:
shaping a sustainable tomorrow

As the SAISC begins a new era in its existence this year, it does so with a determined effort to bring fresh energy, spirit, and enthusiasm to its role as the custodian and champion of the local steel construction sector.

Recognising that relying solely on membership fees is not sustainable, the team has devised a number of other exciting offerings, platforms, and opportunities for members to showcase their companies and capabilities. In doing so, the aim is to provide more value and ensure greater financial sustainability for the SAISC moving forward.

Denise Sherman
Management Consultant
SAISC

Denise Sherman, SAISC Marketing and Management Consultant shares more about this new approach to 'going digital' and the highlights of the SAISC 2023 events and marketing calendar:

The SAISC has revamped its website, Steel Awards projects nominations, and other innovations. All these efforts are aimed at leveraging the digital realm for the benefit of members and the industry as a whole.

However, it's important to note that even in the post-pandemic era, members are keen on in-person and on-site events, in addition to online ones. Therefore, the SAISC is working on hosting those this year.

A platform for excellence and innovation

In the vibrant world of steel construction, the SAISC Steel Awards have long been a platform for excellence and innovation. As the steel industry continues to evolve and adapt to new challenges, this year's awards hold even more significance.

What's new in 2023?

In 2023, the SAISC is not only celebrating innovation in steel construction but is also embracing the digital age. As the world adapts to the benefits of going digital, the SAISC is leveraging this trend to bring the awards closer to its members and the wider public.

One key highlight of the SAISC Steel Awards 2023 is the shift to digital nominations and knowledge-sharing. Gone are the days of traditional paper entries. Instead, participants completed an efficient and user-friendly online submission process.

To further enhance the digital experience, nominees booked online project case study sessions. These sessions provided an opportunity for in-depth exploration of the nominated projects. What's more, project case studies and their technical information have been presented on the SAISC's website. This means that everyone, including the steel industry and wider public can delve into the projects, study the intricate details, and appreciate their technical excellence.

Steel Awards 2022 overall winner – members of the project team with Amanuel Gebremeskel, CEO of the SAISC (5th from the left)

THE
QUANTUM OF QUALITY

LAUNCHING THE SAISC'S NEW QUALITY CERTIFICATION PROGRAMME

Amanuel Gebremeskel
CEO, SAISC

The SAISC, as the custodian of quality in our region – which is one of only six similar industry bodies globally – will be launching a new SAISC quality certification programme to raise the bar of quality steel products, services and projects produced and delivered: not only by our members, but by all role-players in the South African region and steel value chain - and ultimately, across Africa. SAISC CEO Amanuel Gebremeskel tells us more:

There is a dire need for the establishment and development of an overarching quality regime in our industry: one that is internationally recognised and accredited, and which will meet the market's increasing demands for both quality and excellent value for money. The SAISC is strongly strategically positioned as the custodian of quality across the steel value chain to lead in the formation of this proposed new quality regime.

However, this is a resource-intensive project, and we plan to collaborate with our sister Institutes such as the American Institute of Steel Construction (AISC) in the United States, the Canadian Institute of Steel Construction (CISC) and the Steel Construction Institute (SCI) in the United Kingdom, which all have experience in establishing similar quality regimes in their respective countries.

Steel standards development and harmonisation

We also need our local industry in South Africa to get involved and assist us as we get this initiative launched. This will include defining the steel quality standards that need to be developed - and then implementing and promoting these to public and private sector stakeholders across the region.

Our existing high quality steel industry standards form an excellent foundation on which to build, and from which to harmonise standards on the continent - without having to wait for the Pan-African public sector to impose these standards, as the African Continental Free Trade Area (AfCFTA) implementation rolls out.

Our plan once we have developed these steel quality industry standards, is to create a quality certification programme, developed in collaboration with industry and our sister organisations internationally. This will allow both member and ultimately non-member companies to obtain a SAISC quality certification.

The SAISC will evaluate the quality of a company's products and services according to these standards – and will issue a quality assurance certification to those which successfully comply. We plan to roll out the programme over the next 24 months, with the pioneers or early adopters achieving certification by 2024.

South Africa's steel industry is the most professionally and technologically advanced in Africa, and therefore very well-positioned to develop a credible and viable system of definitive steel standards and certifications - and we believe now is the time for us to act, in the drive to raise the bar on quality.

As our valued SAISC members, we look forward to your participation and contribution in this vital initiative, which is one that not only our own members - but the entire steel value chain and industry as a whole - will benefit from in terms of consistently improving products, projects, service and infrastructure.

Yours in steel

Amanuel Gebremeskel
CEO, SAISC

A message from the SAISC's Chairperson: quality and what it means for our members, the local and Pan-African steel sector

Nicolette Skjoldhammer
Chairperson, SAISC

Quality and what it means for any industry is an ever-evolving concept – and question. As technologies evolve, so too must industries and the standards used to measure vital elements such as quality. The steel industry is no exception to this rule.

Quality travels

The SAISC prides itself on being at the forefront of the latest technology and trends impacting the steel construction sector and value chain. This includes attending flagship international events such as the American Institute of Steel Construction's (AISC) annual conference, held earlier this year in April. CEO Amanuel Gebremeskel, together with a group of our members, represented the SAISC at this prestigious global steel event. Quality was naturally high on the agenda at the conference, where the latest steel construction technologies and techniques were showcased and discussed. In addition, valuable networking took place between the SAISC, its members and those of international steel sector companies – and sister Institutes – which also attended.

The critical technical learnings and knowledge gathered at events such as the above are constantly communicated via the SAISC's local networking events, training seminars and communications platforms, such as this new SAISC online newsletter - ***The Link*** – and our revamped website: creating diverse opportunities for SAISC members to be made aware of the latest trends in the global industry.

Talking quality

Further to the above, the SAISC offers a supportive, inclusive network where issues relating to pivotal considerations such as quality can be debated. For example, recently at an industry breakfast organised by the SAISC, the quality of steel was one of many topical points raised, initiating engaging discussions with members which focused on how to deal with this important concern affecting every company within the steel value chain.

Team Africa, Team Quality

As the African Continental Free Trade Area (AfCFTA) agreement gains momentum across the continent it is vital that African companies and countries take the long-term view of 'sowing the seeds for the future', supporting one another and combining resources, skills and experience to lead the way as 'Team Africa' in the provision of quality steel products.

One of the ways in which industrial supply chains on the African continent can collaboratively drive growth, is when companies focusing on the supply, processing, fabrication and erection of steel structures join forces to deliver Pan-African infrastructure projects in the mining, power generation, petrochemical and other industries.

AfCFTA itself is evidence that key stakeholders are already thinking and engaging along the lines of procurement in terms of a 'Team Africa' concept and mechanism - and it is vital we also do our part to contribute to this - and also to harmonise our steel quality standards across the continent.

Quality certification

This is why the SAISC is currently in the planning stages of launching a new quality certification programme that will enhance our existing role as a custodian of quality across the steel value chain, enabling companies to obtain an original SAISC certification – our stamp of quality approval – that will give their clients the peace of mind that products and processes have been evaluated by the SAISC, and have achieved a high standard of international quality.

We sincerely hope that the many innovators, trailblazers and pioneers in our membership base will be among the first to work with us to both develop, implement and monitor this exciting new quality certification programme.

We look forward to embarking on this dynamic quality journey with you all – both to acknowledge the already existing high standards attained, and to further raise the quality bar across the steel supply value chain both locally and across the continent.

Yours sincerely
Nicolette

Nicolette Skjoldhammer
Chairperson, SAISC

HOT DIP GALVANIZING – RELIABLE – REPEATABLE – PREDICTABLE

HDGASA

SANS121/ISO1461

GALVANIZERS

GAUTENG

ARMCO GALVANIZERS – ISANDO
+27 (0)11 974 8511 | mail@armco.co.za

ARMCO GALVANIZERS – RANDFONTEIN
+27 (0)11 693 5825 | mail@armco.co.za

GALFERRO GALVANISERS
+27 (0)11 817 3667 | leana@galferro.co.za

LIANRU GALVANISERS cc
+27 (0)11 814 3080 | calis@lantic.net

PRO-TECH GALVANIZERS (PTY) LTD
+27 (0)11 814 4292 | jonathan@protechgalvanizers.co.za

TRANSVAAL GALVANISERS
+27 (0)11 814 1113 | transgalv@transgalv.co.za

WESTERN CAPE

ADVANCED GALVANISING (PTY) LTD
+27 (0)21 951 6242 | admin@advancedgalv.co.za

GALVATECH (PTY) LTD
+27 (0)21 951 1211 | info@galvatech.co.za

SOUTH CAPE GALVANIZING (PTY) LTD
+27 (0)44 884 0882 | johan@scgalv.co.za

EASTERN CAPE

GALVANISING TECHNIQUES cc
+27 (0)41 486 1432 | galvtech@metalman.co.za

MORHOT (PTY) LTD
+27 (0)43 763 1143 | morhotgalv@gmail.com

KWAZULU NATAL

BAY GALVANIZERS cc
+27 (0)35 751 1942 | jerry@baygalv.co.za

DURBAN GALVANIZING (PTY) LTD – BRIAREDEEN BRANCH
+27 (0)31 563 7032 | shereen@dbngalv.co.za

DURBAN GALVANIZING (PTY) LTD – PHOENIX BRANCH
+27 (0)31 500 1607 | reception@dbngalv.co.za

PINETOWN GALVANIZING
+27 (0)31 700 5599 | admin@pinetowngalvanizing.com

KZN GALVANIZING
+27 (0)69 335 5416 | info@kzngalvanizing.co.za

HOT DIP GALVANIZERS ASSOCIATION SOUTHERN AFRICA
Bedfordview Office Park, Building 1, Ground Floor, 3 Riley Road, Germiston
P.O. Box 2212 Edenvale 1610 Tel: 011 456 7960
Email: hdgasa@icon.co.za Website: www.hdgasa.org.za

HOT DIP GALVANIZERS ASSOCIATION SOUTHERN AFRICA

mentis
AFRICA

A PROGRESSIVE TALE OF GROWTH, INNOVATION AND EXCELLENCE

Innovation and progress define Mentis Africa - a pioneer in manufacturing top-notch grating, handrailing, expanded metal, guardrails, and other light structural steel products.

Unleashing groundbreaking designs tailored to clients' needs, Mentis Africa's team of engineering experts leads the steel industry's technological advancement. They create turnkey steel solutions of unrivalled quality and safety.

Through continuous investment in cutting-edge manufacturing processes and technology, coupled with superior-grade steel, Mentis Africa ensures a consistent, dependable product lineup. This zealous dedication to quality assurance and client satisfaction is evident.

With a state-of-the-art manufacturing facility boasting vast capacity, Mentis Africa efficiently fulfils orders of all sizes, saving time and reducing costs. They have established themselves as a dependable partner in the steel industry, serving numerous loyal clients for over 73 years. Their strong position guarantees continued support for many more clients in the future, showcasing their unwavering commitment to growth and product development.

Quality.
Service.
Innovation.

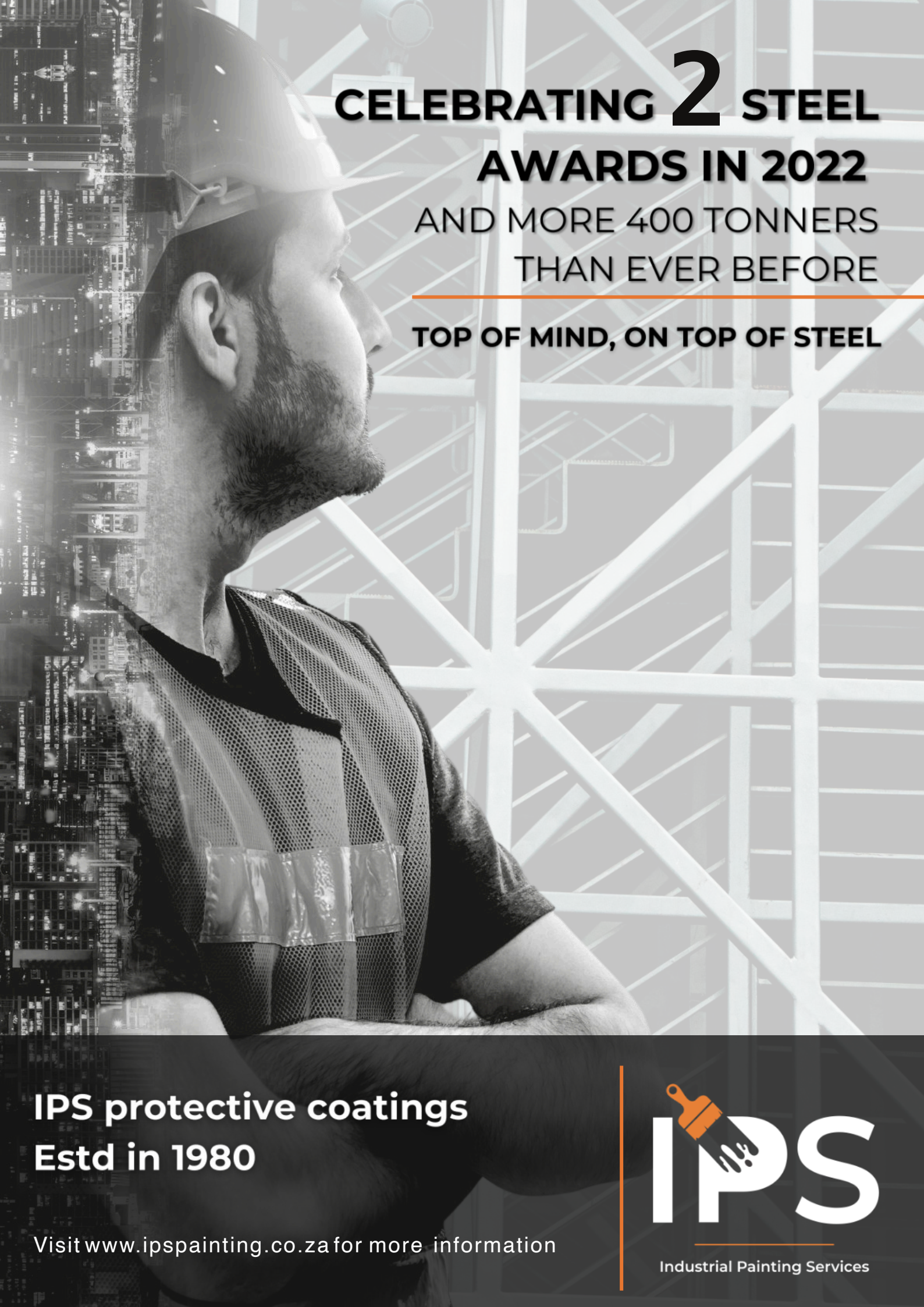
STEWARTS & LLOYDS

120 YEARS
of unbreakable strength

A Trusted Name.
An Established Reputation.

1903 • 120 YEARS • 2023 ANNIVERSARY

E: info@sltrading.co.za
www.stewartsandlloyds.co.za
T: 0860 102 799



CELEBRATING 2 STEEL AWARDS IN 2022

AND MORE 400 TONNERS THAN EVER BEFORE

TOP OF MIND, ON TOP OF STEEL

IPS protective coatings
Estd in 1980

Visit www.ipspainting.co.za for more information

IPS
Industrial Painting Services

Game of Steel:

Steel Awards 2023 to celebrate the power of steel past, present and future

Nominations for this year's Southern African Institute of Steel Construction (SAISC) Awards have featured in everything from local community newspapers to the Guinness Book of Records and have taken shape everywhere from Cape Town to West Africa.

"This iconic annual steel industry event, which enables the Institute to promote the capabilities of steel - an infinitely diverse, resilient material of construction - provides an important platform for honouring the hard work of individuals and companies across the entire value chain," says SAISC CEO Amanuel Gebremeskel.

Glamour and fun meet technology

Denise Sherman, SAISC Marketing and Management Consultant, says, "Although the red carpet event – commonly referred to as the 'Oscars of the steel industry' - adds some glamour, it is the ongoing hard work and innovation invested in the nominated and award-winning projects that are the real drawcard."

Amanuel Gebremeskel, CEO SAISC and Denise Sherman, SAISC Marketing and Management Consultant

She hints that many popular aspects of former events are retained, such as plenty of time for networking in the evening's program. However, a few changes can be expected. These include fun elements such as prizes for the three best-dressed individuals and one for the best-dressed table.

"This year's Game of Thrones theme not only adds a fun element, taken as it is from the hit HBO series, but also highlights the importance of steel throughout the ages," Sherman observes.

"Over thousands of years, few things have had as significant an impact on the development of the world as steel, which effectively defines the way people build structures, cultivate food, fight wars, and travel – to name but a few socio-political elements of life through the ages hallmarked by steel."

"Both the nominators and project teams have embraced technology to showcase their projects. The quality of the project entry information is what makes the Steel Awards work so well, and is integral to their success," she says.

Pan-African punch

"On a more serious note, the Game of Thrones portrays turbulent geo-politics and intense competition – very similar to what the world is experiencing currently, and which is impacting the steel industry not only internationally, but also across the African continent," Gebremeskel comments.

This year, he notes, the Steel Awards have a distinctly Pan-African flavour, with the addition of a new Pan-Africa Trailblazer category: "We have a number of entries from all over the African continent. This year, the Awards demonstrate very tangibly how South Africa's products are being used all over the continent, and feature projects which range from mining to the construction of a church," he says.

The Pan-African nature of the entries also reflects Gebremeskel's call for more regional representation in entries in his keynote address at Steel Awards 2022.

"The quality of the projects featured through these awards is particularly important. We are highlighting that the South African steel construction sector can successfully execute quality, world-class projects throughout Africa," he adds. Furthermore, as the African Continental Free Trade Area (AfCFTA) agreement gains momentum and supply chains across Africa combine to drive growth, enabling companies to supply, process, fabricate and construct steel structures in many industries, Gebremeskel advises that is important that an event such as the Steel Awards has evolved into a truly continental one.

A celebration of diverse collaboration

He also says that the number of nominations has increased this year, as have the number of entries from outside South Africa – as well as the number of projects featuring project interviews with steel supply chain professionals, such as engineers and architects.

"We always want to hear from the people who are engaging with our industry, for example specifying and designing in steel. This year, a number of architects, engineers, contractors and even project owners have participated in project interviews and entries. This also signifies the importance they ascribe to the Steel Awards, investing their time and efforts to ensure high standard entries," he enthuses.

Further to this, more women in the steel supply chain have also submitted projects, as have more small companies and emerging steel entrepreneurs. "Overall, the diversity of participants and projects has increased - which bodes well for overall transformation within the steel sector," Gebremeskel notes.

"There is significantly more collaboration. Previously, the designer presented the fabricator with drawings, and they had to figure out how to put it together. Now, both engineers and contractors are involved right from the get-go. The sequence of the work has essentially changed. This is a major leap forward in an industry such as ours," he remarks.

According to Gebremeskel, architectural, institutional and educational applications are notable in this year's Steel Awards entries – including two projects executed for well-known South African universities.

"I believe that in both cases, the universities and project designers wanted these buildings to showcase that they were world-class. Steel is therefore the physical manifestation of this status, and was used symbolically.

We are therefore very much looking forward to seeing projects such as these and many others celebrated at a vibrant, memorable Steel Awards 2023! One which is an effective showcase of the steel industry's exciting people, history, culture, diversity, capabilities, innovation and Pan-African trajectory," Gebremeskel concludes.

STEEL AWARDS 2023

Nelson Mandela University Ocean Sciences Centre Expansion

Judges

STEEL AWARDS 2023

Each year, a devoted team of professionals invests a significant amount of time and expertise in thoroughly reviewing each nominated project. The SAISC Steel Awards judging process involves both quantitative and qualitative evaluation methods, spanning a five-month period. The SAISC wishes to express its deep gratitude to the Steel Awards 2023 judging panel for their unwavering commitment and their pivotal role in recognising and rewarding excellence within our industry.

Amanuel Gebremeskel
CEO, SAISC

Dennis White
DIRECTOR, SAMCRA

Denise Sherman
MARKETING AND MANAGEMENT CONSULTANT

Spencer Erling
RETIRED SAISC DIRECTOR
EXPERT STEEL AWARDS CONSULTANT

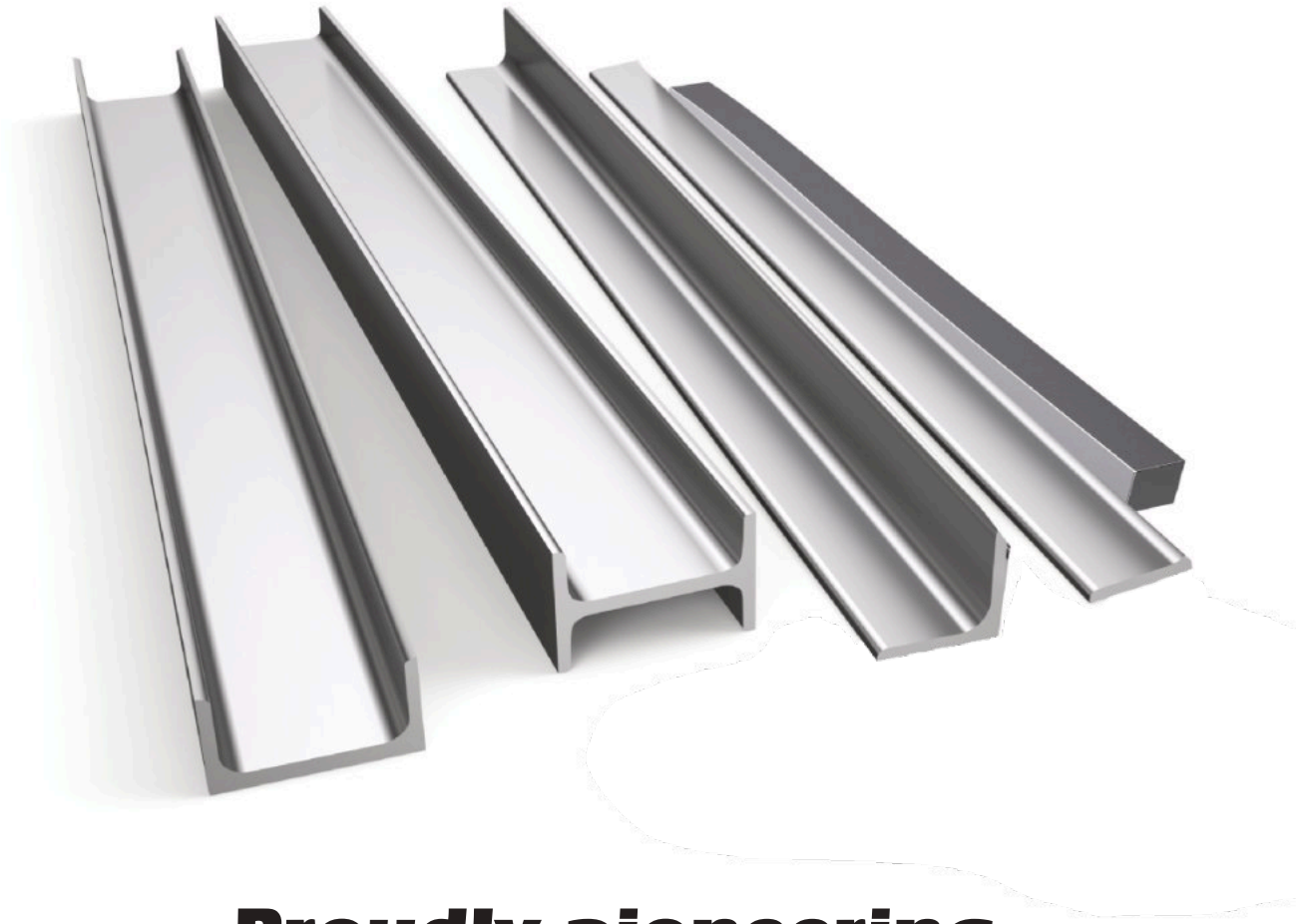
Linda Ness
DIRECTOR
NJV CONSULTING

John Duncan
CONSULTING STRUCTURAL ENGINEER

Franco Mordini
TUBE PRODUCT SPECIALIST
MACSTEEL SERVICE CENTRES SOUTH AFRICA

Emma Loubser
STRUCTURAL ENGINEER
PBA PROJECTS

Mo Phala
DIRECTOR
ARC ARCHITECTS



Proudly pioneering secondary steel manufacturing in South Africa.

Unica Iron and Steel is a first of it's kind, fully integrated mini steel plant, manufacturing light and medium structural steel from iron scrap. Established in Babelegi 2006, the company has garnered a reputation for manufacturing quality light structural sections (window sections, square bar and angle iron) commercially.

The company boasts a new state of the art straight line rolling mill which allows it to produce bigger sections. Unica also has achieved ISO 17025 accreditation for its world class in-house laboratory featuring sophisticated equipment for accurate testing ,which enables Unica to issue the 3.1 certificate to its customers.

Having established itself as a leader in the local South African market for its sections, Unica is ready to open doors for rest of Africa.

TÜVRheinland CERTIFIED

ISO 9001:2015, ISO 14001:2015,
ISO 45001: 2018 accredited

www.unica.co.za

012 719 9736| info@unica.co.za
9th Street Erf 87, Babelegi, Pretoria, South Africa

A division of the UNICA GROUP

Strength & Beyond
UNICA IRON & STEEL

Manufacturers of Light & Medium Structural Steel

Unica Iron and Steel is a leading manufacturer of light and medium structural steel, located in Babelegi, Pretoria, Gauteng.

Established in 2006, the company has grown to over 800 staff operating from a 36 000m². facility where the company has garnered a reputation for manufacturing quality light structural sections (window sections, square bar and angle iron) commercially.

Instead of using iron ore, Unica Iron and Steel melts iron scrap, then rolls the resultant billets into structural steel. This fully integrated mini steel plant is the first of its kind in South Africa, with the concept originating from China and India.

TÜVRheinland CERTIFIED

Mangement System
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

www.tuv.com
ID 9000000029

Always intent on innovation and the highest quality standards, Unica Iron and Steel is proud to be the first steel mill in South Africa to receive all three ISO integrated management systems accreditations:

ISO 9001:2015; ISO 14001:2015 and ISO45001:2018.

www.unica.co.za

012 719 9736| info@unica.co.za
9th Street Erf 87, Babelegi, Pretoria, South Africa

A division of the UNICA GROUP

Strength & Beyond
UNICA IRON & STEEL

Manufacturers of Light & Medium Structural Steel

Strength & Beyond

Vision: To raise the benchmark of the steel industry and become a leading player in the market

We believe that the strength of our product is also the strength of our business. By ensuring a top quality product, we will continue to grow the secondary steel market and remain a leading manufacturer in this area.

Mission: Sustainability and Innovation

To achieve our vision through our dedicated approach and continuous growth, by supplying high quality steel utilising innovative technologies and methods within an environment of motivated employees, focused on continuous improvement making Unica Iron and steel an economically, environmentally and socially sustainable enterprise.

Values: Integrity and Equality

We believe in following the highest business standards, work ethics and corporate citizenship. Our integrity in how we work with our staff and our clients must always be impeccable. We believe in creating equal opportunities for everyone working for Unica Iron and Steel. As a corporate citizen, we believe that the impact we have on the communities and environment around our business, must be positive. To that end, we encourage a culture of care and upliftment, supporting multiple projects to uplift the disadvantaged and provide assistance and relief for those less fortunate.

TÜVRheinland CERTIFIED

ISO 9001:2015, ISO 14001:2015,
ISO 45001: 2018 accredited

www.unica.co.za

012 719 9736| info@unica.co.za
9th Street Erf 87, Babelegi, Pretoria, South Africa

A division of the UNICA GROUP

Strength & Beyond
UNICA IRON & STEEL

Manufacturers of Light & Medium Structural Steel

STEEL AWARDS 2023

Overall Winner

Mpumalanga Fresh Produce Market

The Mpumalanga Fresh Produce Market, recently named the Overall Winner of the prestigious Southern African Institute of Steel Construction's Steel Awards 2023, stands as a remarkable testament to architectural and engineering excellence.

This award-winning project redefines the boundaries of innovation and collaboration in the construction industry. In addition to clinching the overall award, the Mpumalanga Fresh Produce Market also emerged victorious in the BSi Steel Factory, Warehouse and Metal Cladding category, the ASTPM Tubular Steel Category, and was hailed as the Best Regional Project for Gauteng.

Architectural marvel with purpose

The Mpumalanga Fresh Produce Market shines as a beacon of architectural ingenuity. Its primary mission: to create a world-class facility that maximises available space while preserving an optimal microclimate for fresh produce storage. Building 10, the epicentre of this bustling commerce hub, spans an impressive 29 000 m², representing the heart of a complex consisting of 17 strategically designed buildings.

The project's success hinges on the inventive structural design led by Structural Engineer Peter-Ben van Aswegen. The challenge was to create an expansive, obstruction-free interior while minimising the number of internal support columns. To achieve this, a visionary three-dimensional tubular truss system was employed, each span extending an astounding 70 m. The trusses were further optimised with transfer trusses, ensuring unobstructed space beneath. Concrete portal frames provided stability and managed the formidable horizontal forces generated by the roof's unique design.

Collaboration: the cornerstone of success

The Mpumalanga Fresh Produce Market's journey to becoming the Overall Winner of the Steel Awards 2023 represents

"This project united a team of dedicated experts who worked tirelessly to overcome challenges and create something truly extraordinary."

the pinnacle of collaboration among experts in their respective fields. Fabricator Rob Mylroie, Architect Janri Lemmer, Structural Engineer Peter-Ben van Aswegen, and Roofing and Cladding Contractor Terry came together to transform an ambitious vision into a tangible reality. Their combined expertise and unwavering commitment to excellence exemplify the power of teamwork in the construction industry.

Rob Mylroie, the project's Fabricator, highlighted the significance of this collaboration: "This project united a team of dedicated experts who worked tirelessly to overcome challenges and create something truly extraordinary."

Innovative design elements

The Mpumalanga Fresh Produce Market captivates with its unique design elements. The gable ends of the structure feature cable trusses with expansive spans, reaching up to 15 m at the apex. These cable trusses not only add complexity to the project but also accentuate the engineering prowess behind its creation.

The roofing and cladding of the market posed equally intriguing challenges. Terry from T5 Projects, the Roofing and Cladding Contractor, delved into these complexities: "Handling sheets of considerable length, some exceeding 66 m, presented a unique set of challenges. The double layer of sheeting, consisting of a Widek layer at the bottom and an escrow system in between, required meticulous planning and execution."

Transport efficiency and precision fabrication

The logistics of transporting the massive steel trusses from Johannesburg to Mpumalanga presented a major concern. The decision to bolt rather than weld the structure was a strategic choice that allowed for efficient transport and assembly.

Precision fabrication played a pivotal role in the project's success. Trial assemblies were conducted to ensure precise alignment and assembly of the trusses. The team meticulously planned and implemented jigging systems to handle the

"Steel's high strength-to-weight ratio made it the perfect choice for this project. We could minimise internal columns while ensuring the structural integrity of the entire facility."

"This project showcases what is possible when experts from various fields come together to create something extraordinary. It redefines industry standards and sets a benchmark for future projects."

Janri Lemmer, Orbic Architects

project's complexity, resulting in a flawless assembly process. Peter-Ben van Aswegen, the project's Structural Engineer, underscored the importance of these trial assemblies: "Trial assemblies were critical to ensuring precise fabrication and alignment of the trusses. Meticulous planning and the use of jigging systems were essential to the project's success."

Benefits of steel: strength and aesthetics

The Mpumalanga Fresh Produce Market serves as a prime example of the advantages of using steel in large-scale construction projects. Its high strength-to-weight ratio made steel the ideal choice for creating a roof with minimal internal columns. The tubular steel elements not only enhanced structural integrity but also added to the building's aesthetic appeal.

Rob Mylroie spoke about the benefits of steel in the project: "Steel's high strength-to-weight ratio made it the perfect choice for this project. We could minimise internal columns while ensuring the structural integrity of the entire facility."

Success and Significance

The Mpumalanga Fresh Produce Market is more than just a functional facility; it is a testament to human ingenuity, a symbol of collaboration, and a beacon of excellence in engineering and architecture.

Janri Lemmer from Orbic Architects summarised the project's significance: "This project showcases what is possible when experts from various fields come together to create something extraordinary. It redefines industry standards and sets a benchmark for future projects."

The Mpumalanga Fresh Produce Market is not merely a building; it is a landmark that exemplifies the power of collaboration, innovation, and precision in the construction industry.

PROJECT TEAM

Nominator and Steelwork Contractor
TASS Engineering

Client / Developer
Mpumalanga Economic Growth Agency

Main Contractor
ENZA Construction

Architects
Orbic Architects

Structural Engineer
P Design

Steel Detailer
3D Struct

Steel Merchants
Macsteel / Allied Steelrode / BSI Steel

Steel Erector
GSE Construction / CTK Trading

Cladding Manufacturer
Safal Steel

Cladding Roll Former / Profiler / Supplier
Safintra South Africa

Cladding / Roofing Contractor
T5 Projects

PROJECT DETAILS

Project Completed
2023

Steelwork Completed
December 2021

Steel Tonnage
1537 tonnes

Steel Profiles Used
Predominantly circular hollow sections

Cladding Completed
June 2023

Cladding Tonnage
222 tonnes

Cladding Material/Profile Used
Saflok 700® / Widedek®

CATEGORY

Mining and Industrial

STEEL AWARDS 2023

Advancing Mining and Industrial Excellence:

Steel's role in South African and African Landscapes

In the Steel Awards 2023 Mining and Industrial Category, we delve into the remarkable impact of steel construction in the mining sector, an industry that drives progress and innovation on the African continent and beyond.

In the challenging landscapes and rigorous conditions, steel construction stands as a symbol of strength, resilience, and progress. It is not just a choice of material; it's the backbone of the industry.

Steel's prominence in mining is rooted in practicality. Its durability makes it impervious to the harshest environmental elements, ensuring longevity and operational continuity. Safety is paramount in mining operations, and steel's robustness and fire resistance capability creates a more secure environment for workers and equipment.

The adaptability of steel is a defining feature. It enables the construction of complex structures, facilitating the seamless flow of operations and enhancing productivity. Furthermore, steel's sustainability and cost-effectiveness align perfectly with the industry's evolving needs and global sustainability goals.

As we gather here to honour the achievements of those who have harnessed the power of steel in mining and industrial applications, we pay tribute to innovation, excellence, and progress. The SAISC Steel Awards 2023 celebrate the remarkable projects that have shaped the mining landscape in South Africa and beyond, highlighting the pivotal role of steel in advancing the industry's capabilities.

Join us in this exploration of innovation and accomplishment as we recognise the transformative projects and individuals who have solidified steel's position as an essential pillar of mining and industrial progress in Africa.

steel

Winner
Azmet Reactors

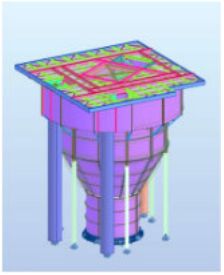
STEEL AWARDS 2023

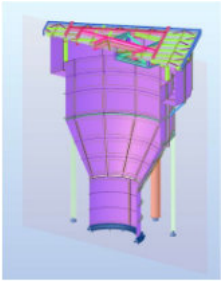
Steel's masterpiece: an “ore-chestrated symphony in reactor design, fabrication, and transportation

In a remarkable fusion of engineering excellence and steel's unyielding fortitude, the Azmet Reactors project has received the top award in the Mining and Industrial Category at the Southern African Institute of Steel Construction’s prestigious Steel Awards 2023. As the orchestrator of this ingenious "ore-chestrated" symphony, Viva Engineering shines a spotlight on precision engineering, intricate design, exacting fabrication, and an unmatched logistical tour de force in transporting six monumental reactors.

Precision engineering takes centre stage

The Azmet Reactors project is a testament to precision engineering's transformative potential. Each reactor, with its imposing 9.9 m diameter and towering 11.6 m height, required a level of precision that showcases exceptional engineering. Collaboratively led by Viva Engineering, this symphony of reactors embodied a design that pushed the boundaries of structural engineering. A striking example of intricate design processes, these reactors demanded meticulous detailing to ensure their operability and structural integrity.



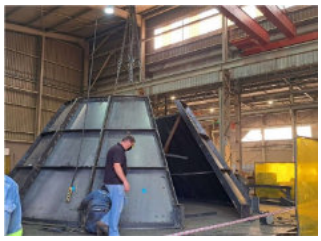


Meticulous design and structural steel

Underpinning the success of the Azmet Reactors project was the strategic use of structural steel. This material of choice facilitated the seamless orchestration of the reactors' complex design, ensuring they met the highest industry standards. A finely tuned collaboration between designers, engineers, and fabricators allowed for precise modelling of the reactors, utilising finite element analysis.

Fabrication and the art of steel craftsmanship

Once the designs were finalised, the project moved into the fabrication phase. The conical segments, meticulously fabricated and assembled, showcase double-row rows of bolts that highlight the rigorous attention to detail. Precise welding techniques and careful planning ensured that every bolt, every plate, and every angle met the demanding specifications of this grand symphony.



Transporting these colossal reactors from their fabrication site to the Democratic Republic of Congo was no small feat. The challenge of size was met with meticulous planning, ensuring the transportation of these intricate steel giants was executed with precision.

Viva Engineering's team, well-versed in the unique demands of this project, used specially designed cradles constructed from structural steel to secure the reactors for their journey. This approach ensured stability, minimised movement, and protected the delicate internal surfaces, including the rubber lining that seals each tank.

A resounding success in erection

Upon arrival in the Democratic Republic of Congo, the Azmet Reactors project continued to impress. The erection and construction phase echoed the same precision and attention to detail seen in design and fabrication. Each reactor was assembled in sections, with cantilevered slabs, steel screens, and pergolas seamlessly integrated.

Steel's ongoing role in industry advancement

The Azmet Reactors project stands as a testament to the essential role steel plays in advancing the industry. Steel's adaptability, strength, and precision were on full display, allowing engineers and fabricators to push the boundaries of what is possible. This project, led by Viva Engineering, serves as an inspiration to structural engineers and fabricators worldwide, showcasing what can be achieved when precision engineering and steel craftsmanship come together.

This project not only exemplifies the industry's technical capabilities but also underscores the endless possibilities when engineering mastery and steel's strength intertwine.

Project Summary:

Complex Reactor Geometry: The Azmet Reactor project focused on designing and fabricating complex fluid-containing reactors with geometric intricacies. The key challenge was ensuring transportability while maintaining structural integrity.

Finite Element Analysis (FEA): The project relied heavily on Autodesk Robot Structural Designer for finite element analysis. FEA was employed to scrutinise both the plate work and steel members. It enabled a detailed examination of stresses, deflections, and load distribution.

Meshing Precision: Achieving precision in meshing was critical. Mesh sizes ranged from 50 mm to 100 mm, depending on component complexity. In cases where components had unique shapes, individual meshing was conducted to ensure accurate alignment and load distribution.

Load Analysis: A comprehensive load analysis encompassed various factors, including hydrostatic forces from the fluid contents, self-weight of steel components, wind loads, and dynamic loads from the machinery supported on the platform. The cantilevered platform design presented challenges, necessitating meticulous load calculations for stability.

Splice Connection Modelling: Splice connections were meticulously modelled using bolt elements to precisely represent the load transfer mechanism. This approach ensured that load transmission primarily occurred through the bolts, avoiding potential stress concentrations.

Structural Enhancements: Additional support frames and columns were strategically introduced to reinforce critical points in the reactor structure. These structural enhancements optimised load distribution, ensuring stability and safety.

Stability Assessment: A thorough stability assessment was conducted, considering different operational scenarios. This included assessments with and without removable maintenance pipes, particularly under maximum wind loads, to validate the structure's stability.

Collaboration and Clash Resolution: Collaborative efforts with shop detailers and clients played a crucial role in ensuring the components fitted seamlessly during assembly. The meticulous modelling of rubber lining to seal the tank and prevent leaks required careful consideration.

Fabrication Challenges: The fabrication process involved intricate assembly processes, including aligning components precisely and installing rubber lining to prevent leakage. Extreme care was exercised during handling and transportation to avoid damage to the rubber-lined panels.

Transportation Planning: Optimised truck loading strategies were devised to minimise transportation costs and maximise efficiency. Calculations were performed to determine the optimal number of truckloads while ensuring safe transportation.

Precise Steel Application: The project underscored the critical importance of precise steel application. It demanded exacting tolerances and meticulous attention to detail during fabrication and assembly to achieve the desired structural integrity.

Quality Control: Stringent quality control measures were enforced throughout the project to maintain the highest standards of precision and safety.

Timely Completion: Despite the technical complexities, the project was successfully completed within the specified timeline, demonstrating the team's expertise and commitment.

This project serves as a testament to the intricate utilisation of steel in a highly demanding technical context. The focus on precision in design, analysis, and fabrication, alongside rigorous quality control measures, was paramount in achieving the project's technical objectives.

PROJECT TEAM/DETAILS

Nominator and Main Contractor
VIVA Engineering

Client
Azmet Technologies and Projects

Structural Engineer
RMCE

Steel Detailer / Erector / Construction
Azmet

Steel Merchants
Macsteel, Allied Steelrode, BSi Steel

Project Completed
December 2023

Steelwork Completed
August 2023

Tonnage
650 tonnes (Total project)
280 tonnes (Reactor portion)

Commendation
Northam Zondereinde 3 Shaft

Forging Excellence

Innovative precision steelwork and modular design shine in award-winning project

The crowning achievement for the Northam Zondereinde 3 Shaft project came in the form of a commendation at the SAISC Steel Awards 2023. This prestigious recognition affirmed the project's ground-breaking nature and its contribution to advancing the field of mining engineering.

The Northam Zondereinde 3 Shaft project entailed the design, fabrication, and installation of a cutting-edge headgear complex for Northern Platinum. This complex showcased innovative modular design and precision steelwork, highlighting the remarkable capabilities of the project's engineering team.

Receiving a commendation at the SAISC Steel Awards 2023 is a testament to the exceptional work carried out by DRA Global and Steel Services and Allied Industries. The project's achievements have exceeded industry standards.

The Northam Zondereinde 3 Shaft project has set new industry standards for precision steelwork and modular design. This achievement is a result of the collaborative efforts of DRA Global and Steel Services and Allied Industries, showcasing their unwavering commitment to pushing the boundaries of what is possible in the world of mining engineering.

The headgear complex

At the heart of the Northam Zondereinde 3 Shaft project lies a cutting-edge headgear complex designed to access deeper Merensky Platinum mining areas. This innovative structure alleviates pressure on existing shafts, providing access to new mining areas while ensuring the highest safety standards.

The headgear complex of the Northam Zondereinde 3 Shaft project stands as a technical marvel. Constructed primarily from steel, the structure is designed to withstand immense loads and operate efficiently, all while ensuring the safety of the personnel working within.

Key technical details:

Material: High-strength structural steel was selected for its durability and load-bearing capabilities.

Design Load: The headgear complex is engineered to withstand vertical loads in excess of 2500 kN, ensuring safety during rope break scenarios.

Modular Design: The use of a modular design approach allowed for the efficient fabrication and assembly of components, minimising on-site construction time.

Safety Features: Advanced safety features, including cage crash levels and counterweight crash levels, have been integrated to protect against potential accidents.

Innovative Connections: Complex connections, such as the compound section with compound angles, were meticulously designed to meet both structural and safety requirements.

Load Testing: Rigorous load testing, including a 250 tonne load test, was conducted to ensure the structural integrity of critical components.

Collaboration for unprecedented success

The collaboration between DRA Global and Steel Services and Allied Industries was fundamental to the project's success. It demonstrated the power of teamwork and innovation, with both entities seamlessly working together to overcome challenges and achieve remarkable milestones.

Collaboration highlights:

BIM Interface: Detailed Building Information Modelling (BIM) played a crucial role in ensuring precise coordination between the design and fabrication teams.

Modular Approach: Phased modular fabrication and assembly reduced on-site construction activities, enhancing safety and efficiency.

Rigging Studies: Thorough rigging studies were conducted to optimise the lifting and installation of heavy components.

Load Testing Supervision: Engineers closely supervised load testing to validate the structural integrity of critical elements.

Advancing mining technology:

Access to Deeper Deposits: The project's innovative headgear complex enables access to deeper Merensky Platinum mining areas, expanding the potential for resource extraction.

Improved Safety: Rigorous safety standards and the integration of safety features ensure a secure working environment.

Sustainable Practices: The efficient use of steel and modular design contribute to sustainable mining practices by reducing waste and minimising construction time.

Awards highlighting excellence

Receiving a commendation at the SAISC Steel Awards 2023 is not just an accolade; it's a recognition of the dedication, precision, and innovation that defined the Northam Zondereinde 3 Shaft project. It serves as an inspiration to the entire mining engineering community, encouraging future advancements in the field.

This project represents a significant leap forward in mining engineering. Its modular design and precision steelwork have redefined what is possible in this industry, opening doors to safer, more efficient, and sustainable mining practices.

PROJECT TEAM

Nominator and Structural Engineer
DRA Global

Client
Northam Platinum

Architects
DRA Global

Main Contractor
Steel Services and Allied Industries

Steelwork Detailer and Contractor
Steel Services and Allied Industries

Steel Merchants
Macsteel, BSi Steel, Allied Steelrode

Cladding Manufacturer
Global Roofing Solutions (GRS)

Cladding Roll Former / Profiler / Supplier
Global Roofing Solutions (GRS)

Cladding / Roofing Contractor
Global Roofing Solutions (GRS)

PROJECT DETAILS

Project Completed
Ongoing (2032)

Steelwork Completed
2023

Steel Tonnage
566 tonnes
Headgear (380 tonnes)
Winder House (186 tonnes)

Steel Profiles Used
Plate girders (floor steelwork and raking legs)
Universal columns (Columns)
Universal beams (Floor steelwork)
Equal angles (floor bracing)
Circular hollow sections (Vertical bracing)

Cladding Completed
March 2023

Cladding Tonnage
Winder house: +/- 30 tonnes
Headgear: +/- 6 tonnes

Cladding Material/Profile Used
IBR686 - 0.58 and 0.8mm Polycarb
Translucent sheeting

Scaw Stack project showcases steel engineering excellence and sustainable fabrication

Innovative design and precision fabrication of S355JR steel ushers in a new era for infrastructure projects

The recently completed Scaw Stack project, a monumental engineering achievement in Johannesburg, South Africa, has been awarded a commendation in the Mining and Industrial Category at the Steel Awards 2023.

This pioneering project features a towering 78 m steel stack, distinguished by its intricate design and precision fabrication using S355JR steel, setting new standards for engineering excellence and sustainable materials.

Designing the Towering Marvel

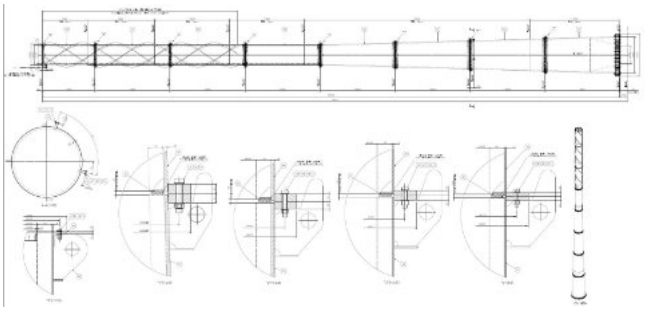
At the heart of the Scaw Stack project is a towering steel stack that defies conventional design. Soaring over 78 m into the sky, it showcases the limitless potential of steel in engineering. The design includes a base with an impressive diameter of over 5.7 m, supported by flanges measuring 65 mm in thickness. Every aspect of this project, from its grandeur to its intricate details, reflects a commitment to precision engineering.

S355JR Steel: a sustainable choice

One of the most remarkable aspects of this project is the deliberate choice of materials. The stack primarily employs S355JR steel, comprised of certified mild steel plates. This conscious selection aligns perfectly with sustainability objectives. S355JR steel offers the dual advantage of durability and environmental responsibility, ensuring the longevity of the structure while minimising its ecological footprint.

Uncompromising quality in fabrication

The Scaw Stack project exemplifies uncompromising quality in every phase of fabrication. Each component undergoes meticulous scrutiny, adhering to rigorous industry standards. The entire stack, from its individual sections to the helical spirals adorning its upper reaches, was crafted with the utmost precision and attention to detail.



Intricate helical spirals

The helical spirals atop the Scaw Stack are a testament to engineering innovation. These spirals serve a vital role in the stack's functionality, helping to control wind dynamics and maintain safety compliance. Constructing them required a delicate balance of technology and craftsmanship.

The process began with 3D modelling to precisely design the spirals. However, the challenge lay in translating these designs into reality. Skilled artisans, guided by their expertise, played a crucial role in shaping and attaching these spirals to the stack. The spiral geometry was critical, as it had to ensure optimal wind resistance and structural integrity.

Modularisation for efficiency and safety

Efficiency and safety were paramount considerations throughout the Scaw Stack project. To optimise construction and mitigate on-site welding risks, a modularisation approach was employed. This method allowed for extensive pre-assembly of components, minimising the need for welding during installation and ensuring a safer working environment.

Welding excellence

The welding standards upheld during this project were nothing short of exceptional. Every weld underwent comprehensive testing, including ultrasonic and dye penetrant examinations. This stringent quality control not only guarantees the structural integrity of the steel stack but also ensures its long-term durability.

High-zinc paint for corrosion resistance

To safeguard against corrosion and guarantee the stack's longevity, it received a protective coating of high-zinc paint. This specialised layer can endure high temperatures, a critical requirement given the stack's purpose.

Cost-effective sustainability

Perhaps the most impressive aspect of the Scaw Stack project is its economic viability. This sustainable solution demonstrates that responsible engineering can also be cost-effective. With a projected payback period of just four years, the project reinforces steel as the preferred choice over alternative materials like concrete.

Client satisfaction

Representing the client, Mike expressed satisfaction with the project's quality and efficiency. The decision to utilise S355JR steel has not only met but exceeded the client's expectations, aligning perfectly with their goals.

Opportunities for further exploration

The success of the Scaw Stack project underscores the boundless possibilities and opportunities offered by S355JR steel in engineering applications. It sets a precedent for responsible material use, precision engineering, and cost-effective sustainability that can inspire future projects across various industries.

PROJECT TEAM/DETAILS

Nominator and Main Contractor
Betterect

Client
SCAW

Steelwork Erector / Construction
SCAW

Project Completed
July 2023

Steelwork Completed
July 2023

Steel Tonnage
140 tonnes

Steel Profiles Used
S355JR plate

For strength and durability, we have you more than covered.

Macsteel reinvented the construction landscape with our innovative Novotexi 440® product range and Sky Former. However, we aren't only about robust roofing solutions, our side panels, beams and cold formed sections provide the same level of durability, strength and convenience on any industrial, commercial or building projects. Offering a turnkey solution.

macsteel.co.za

MACSTEEL®

Pursuing Reinvention

CATEGORY

Pan-African Trailblazer

STEEL AWARDS 2023

MACSTEEL®
Pursuing Reinvention
Category Sponsor

Forging economic prosperity:

The impact of steel export projects across Africa

The Macsteel Pan-African Trailblazer category, featured at the SAISC Steel Awards 2023, offers a window into the transformative power of steel export projects on the African continent. This segment delves into the pivotal role steel exports play in driving economic growth, fostering innovation, and fostering cross-border collaboration.

In the dynamic landscape of international trade and commerce, steel export projects are the bedrock upon which Africa's economic prosperity stands. These initiatives empower nations to leverage their steel manufacturing capabilities to meet the demands of global markets while simultaneously fortifying their domestic industries.

The benefits are manifold. Steel exports fuel economic growth by generating revenue streams that can be reinvested in critical sectors, such as healthcare, education, and infrastructure development. The jobs created along the steel export value chain provide livelihoods for countless individuals, lifting communities out of poverty and supporting national development agendas.

Moreover, steel export projects drive innovation. The pursuit of international standards and market competitiveness forces continuous improvement in manufacturing processes, product quality, and technological advancement. This innovation ripple effect extends beyond steel production, catalysing progress across various industries.

Steel exports also foster cross-border collaboration. They encourage African nations to come together in partnerships and alliances, facilitating the exchange of knowledge, skills, and resources. These collaborations promote regional integration, strengthening Africa's position on the global stage.

As we gather to celebrate the achievements of those trailblazers who have spearheaded steel export projects across the continent, we acknowledge their profound contribution to economic growth, innovation, and unity. The SAISC Steel Awards 2023 spotlight transformative projects that have established steel exports as an engine of progress for Africa, illuminating a brighter future of economic prosperity and collaboration.

Join us in this exploration of economic vitality and cross-border cooperation as we recognise the visionary projects and individuals who have cemented steel export projects as a cornerstone of Africa's enduring success story.

In a world where economic resilience is paramount, steel export projects serve as beacons of hope for Africa. They represent a tangible path towards self-sufficiency and international recognition.

Winner
Azmet Reactors

STEEL AWARDS 2023

The Azmet Reactors project has earned acclaim at the SAISC Steel Awards 2023. This remarkable project showcases the pinnacle of precision engineering, intricate design, fabrication, and unparalleled logistical planning.

At its core, this project revolves around six massive reactors, each with a towering 9.9 m diameter and 11.6 m height. Precision engineering takes centre stage, pushing the boundaries of structural engineering. The intricate design processes demanded meticulous detailing to ensure operational efficiency and structural integrity. Structural steel played a vital role, facilitating precise modelling through finite element analysis.

Transporting these colossal reactors to the Democratic Republic of Congo required meticulous planning and specially designed cradles constructed from structural steel to ensure stability, minimise movement, and protect delicate internal surfaces.

Erection and construction mirrored the precision seen in design and fabrication, resulting in a harmonious blend of engineering principles and functionality.

The Azmet Reactors project underscores steel's pivotal role in industry advancement, showcasing its adaptability, strength, and precision. Viva Engineering's leadership in this endeavour inspires structural engineers and fabricators worldwide.

In conclusion, this project leaves an indelible mark on the world of structural engineering and steel construction. It epitomises the industry's technical capabilities and demonstrates the boundless potential when engineering mastery and steel's strength converge.

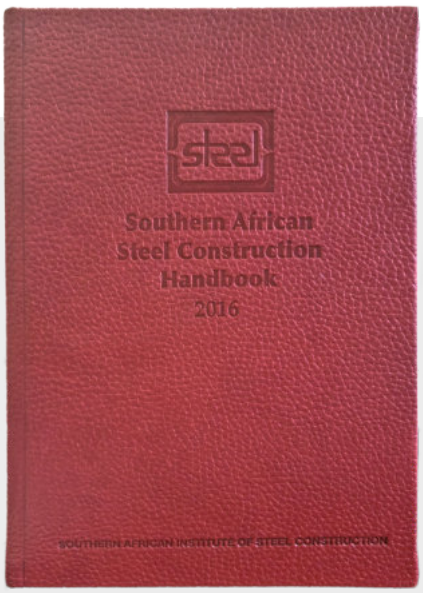
For a complete project overview refer to pages 26 - 27

Purchase your copy of the Red Book

The handbook contains information, in ready-reference form, relating to the entire scope of steel construction as used in buildings and a large a variety of other typical structures.

SAISC member and student pricing

SAISC members and students qualify for preferential pricing. Please visit the SAISC website to purchase the Red Book as well as other useful industry related publications online.



Commendation
Lumwana CV3 Stockpile Conveyor

STEEL AWARDS 2023

The Lumwana CV3 Stockpile Conveyor project, located in Zambia, was initiated to address critical structural issues in a feed conveyor system essential for maintaining consistent production. Historical problems with the existing conveyor system, including foundation challenges and collapses, had led to substantial production disruptions over time. Despite previous remediation efforts, continuous monitoring revealed persistent soil foundation instability, posing significant risks to the entire system's integrity. The project's success hinged on innovative structural solutions, which included:

Strengthened Foundation: Engineers opted for concrete columns to reinforce the conveyor's base, capitalising on their load-distributing capabilities and proven effectiveness in stabilising foundations.

Steel Truss Design: A new steel truss was meticulously designed off-site using CAD tools to ensure precision. This approach minimised installation errors and saved considerable time by addressing potential discrepancies before on-site assembly.

Advanced 3D Scanning: 3D scanning technology played a crucial role in precise component placement, enabling seamless integration within the complex conveyor system. This accuracy was vital for clash detection, allowing for immediate design adjustments and preventing component interference during operation.

Stainless Steel Sliding Connections: Tongue and groove connections were incorporated to accommodate movement while maintaining structural integrity. These connections were essential due to the system's dynamic nature, where slight movements could result in significant wear and tear. Specific tools and billets were employed to ensure a snug fit and longevity. The project involved several key elements related to construction and installation:

Load Transfer and Design Dynamics: A central tower served as the linchpin connecting the old and new trusses, facilitating consistent load transfer. To address the movement of the existing structure, engineers employed pins, temporary steel plates, and pivoting points. These components were carefully chosen to provide flexibility while maintaining a robust connection, ensuring smooth conveyor operation without undue stress on any particular component.

Testing and Verification: Rigorous post-construction testing was conducted, including simulated loads, dynamic analysis, and real-time monitoring. This testing confirmed that the conveyor could handle actual operational demands. Feedback loops were integrated to allow for continuous monitoring and adjustments as needed in the future.

The Lumwana CV3 Stockpile Conveyor Project stands as a ground-breaking achievement in conveyor system renovations, earning a commendation award at the SAISC Steel Awards 2023. By addressing foundational issues and integrating advanced technologies, it has set a benchmark for practical and efficient engineering. Future projects can draw valuable technical insights to ensure the development of safer and more efficient conveyor systems throughout Africa.

PROJECT TEAM/DETAILS

Nominator and Structural Engineers
Resultant Consulting Engineers

Client
Barrick Lumwana Copper Mine

Main Contractor (Steelwork and Detailing)
Bhubezi Projects

Steel Fabrication / Erector / Construction
Bhubezi Projects, Stefanutti Stocks, Steeplejack Services

Steel Merchants
Macsteel, Allied Steelrode, TWP

Conveyor Commissioned
October 2022

Steelwork Completed
August 2022

Steel Tonnage
71 tonnes

Flowing Towards a Greener Future

Steel Powering the ENK Hydro Project

The ENK Hydro Project, renowned for its innovative use of steel and its unwavering commitment to delivering sustainable energy to remote regions, has received a commendation in the Pan-African Trailblazer category at the prestigious SAISC Steel Awards 2023. This recognition, a testament to the project's engineering, underscores the remarkable journey of this venture and its pivotal role in shaping a greener future.

The ENK Hydro Project, situated in North Kivu, Democratic Republic of Congo (DRC), was initiated by Enque Energy, a Belgian company dedicated to renewable energy investments. The mission: to harness the power of the river and provide sustainable electricity to underserved communities. Three critical structures comprised the project:

Hydro Plant Structure: The heart of the project, a pre-engineered building designed to house two massive turbines. Overcoming challenges, including substantial excavation, proximity to the river, and the need for a 35 tonne overhead gantry, this structure was a structural marvel.

Steel Bridge Channel: Spanning a daunting 30 m valley, the bridge channel was a logistical challenge. Situated in an isolated area with no access to lifting equipment, innovation was required to ensure successful completion.

Turbine Rotator: Precision was paramount for the turbine rotator, tasked with placing 35 tonne turbines. The level of fabrication accuracy was unparalleled, emphasising the critical role of steel in this project.

Structural framing and fabrication

The structural framing of the project presented unique challenges. To support the 35 tonne overhead gantry in the hydro plant structure, engineers utilised a 14.5 m clear span, opting for a pre-engineered building. The 35 tonne crane load added substantial complexity to the design, focusing on lateral stability.

To address the challenging terrain, the steel bridge channel was designed with innovative movement joints, accommodating the natural movement of the water below. Bolted sections and a manual hoist system were employed to overcome the remote location's lack of access to lifting equipment.

Precision was the watchword for the turbine rotator's fabrication. Steel plates, laser-cut with exact curvature, were meticulously assembled, with a focus on accuracy. The pre-assembly process was undertaken twice, ensuring every element met the highest standards.

Transportation and erection

Transporting materials to this remote site was a logistical puzzle. Shipping from Durban, South Africa, to Mombasa, Kenya, and then road transport through Kenya and Uganda to the DRC required meticulous planning. Custom crates and careful handling were essential for the two-ton turbine rotator, a critical component in the project's success.

Erection and construction in such a remote area posed significant challenges. A truck-mounted crane with limited height had to be used, and a road had to be created to access the site. Installation required a step-by-step process, beginning with the installation of the tracks at the bottom and utilising a makeshift pulley system.

Construction and installation

The hydro plant's construction involved careful placement of rafters, bracing, and smaller components like purlins and a mezzanine floor. The crane beams provided essential lateral stability during erection. For the steel bridge channel, installation started with the placement of channels and the hoist system, followed by the assembly of the bridge's skeleton and the placement of lights.

One of the most impressive aspects was the accuracy required in installing the turbine rotator. It was used to rotate massive 35 tonne turbines into position, emphasising the precision and strength of steel in critical applications. The ENK Hydro Project accomplished several remarkable engineering feats:

Remote Success: Overcoming the logistical nightmare of a remote location, the team delivered materials and equipment with impeccable planning and execution.

Security Challenges: Navigating through a region marred by unrest, the project's security measures ensured the safety of personnel and assets.

Blasting: The controlled blasting of the site demonstrated not only precision but also environmental responsibility.

Innovative Solutions: The project introduced innovative movement joints in the steel bridge channel, accommodating natural water movement with engineering excellence. The use of a manual hoist system for installation, despite its challenges, showcased the team's resourcefulness.

Clean Energy Impact: Above all, the ENK Hydro Project's crowning achievement is the delivery of clean, sustainable electricity to remote areas in the DRC, significantly improving living conditions and paving the way for future development.

Toit Oosthuizen, the lead structural engineer and fabricator, summarised the project's significance: "We are extremely proud of our role in delivering a good quality product to our clients in the most remote areas of Africa. Being part of this project, improving living conditions in the DRC through electricity access, is a massive point of pride for us."

PROJECT TEAM/DETAILS

Nominator, Structural Engineer, Steelwork Contractor and Steel Detailer
JTC Building Systems

Client
Energie Du Nord Kivu

Steel Merchant
Allied Steelrode
(Lipped channel, plates and hot rolled steel)

Cladding Manufacturer / Roll Former / Profiler
Safintra South Africa

Project Completed
June 2023

Steelwork Completed
December 2022

Steel Tonnage
Approximately 50 tonnes

Steel Profiles Used
Pre-Engineered Building (PEB) design with combination of built-up sections from plate for Hydro Structure Angles and 8mm plate for water channel bridge

Cladding Tonnage
Winder house: 20 tonnes

Cladding Material Used
0.47 mm AZ 150 Zincal

Cladding Profile Used
Trimflute (Safintra South Africa)

SAMCRA
SOUTH AFRICAN METAL CLADDING AND ROOFING ASSOCIATION

A VIEW

FROM THE TOP

SAMCRA UPDATE

Developing cladding standards and representing the metal cladding and roofing sector

Woodridge Packhouse - winner of the Agri Industrial Steel Award and the Regional Best Project in the Eastern Cape, Steel Awards 2022 for its innovative cladding

KES Aquatic Centre - winner of the Sports Facilities Steel Award, Steel Awards 2022 for its innovative roof structure and cladding

Dennis White, Director SAMCRA

The South African Metal Cladding and Roofing Association (SAMCRA) was formed in 2013. As a sub-association of the SAISC, it is a unified body representing the interests of the local metal cladding and roofing industry: providing lobbying, technical expertise, and consulting support services - as well as arbitration for members and their customers. As part of our role, we have been closely involved with the development of the South African Bureau of Standards (SABS) new national standard for self-supporting metal cladding, to be released imminently.

Manufacturing quality benchmark

It was important to devise a state-of-the-art best practice standard for the industry, to provide suppliers and contractors with a benchmark for the design, testing, manufacturing and installation of quality products which are competitive internationally. Demand for cladding remains high, making the implementation of this standard essential.

Steel cladding on the rise

Due to the demand for steel cladding in recent years, the design trend has moved decisively in favour of the innovative use of cladding to enhance architectural appeal – even replacing tiling - on a wide range of construction projects: from shopping malls and gyms to commercial parks, banks (including the South African Reserve Bank), warehouses and residential housing developments. Our industry has consistently introduced new profiles and techniques, including on-site roll-forming to meet the demands of ever larger and more complex structures. This strong upward trajectory has continued despite the higher costs thereof.

This may be attributed to its attractive finish and durability - which boosts the visual impact of a company's external branding - and has a lifespan, with modest maintenance, of some 10 to 20 years, provided the chosen protective coating is matched to the environment in which it is installed.

With this in mind, developers and owners of commercial offices and warehouses - for the storage of imported goods - and to service our growing e-commerce sector - are turning to cladding, for its aesthetic, brand-boosting appeal and its low-maintenance durability.

New SABS standard

The new SABS standard will clarify the structural properties and protective coatings of cladding products for suppliers, contractors and consumers, providing a quality benchmark for manufacturers and all professionals in the sector to refer to, and meet. Many end-users and consumers are not aware that there is a wide range of different thicknesses, qualities of steel, metallic and organic protective coatings and profiles. They may simply specify to a contractor that they want 'galvanised steel' - not knowing that the thickness and geometry of a particular profile - plus thickness and type of protective coatings - makes a huge difference to its quality, strength, and durability.

This new standard will therefore guide the industry and help end-users who want to ensure they know what they are asking for upfront.

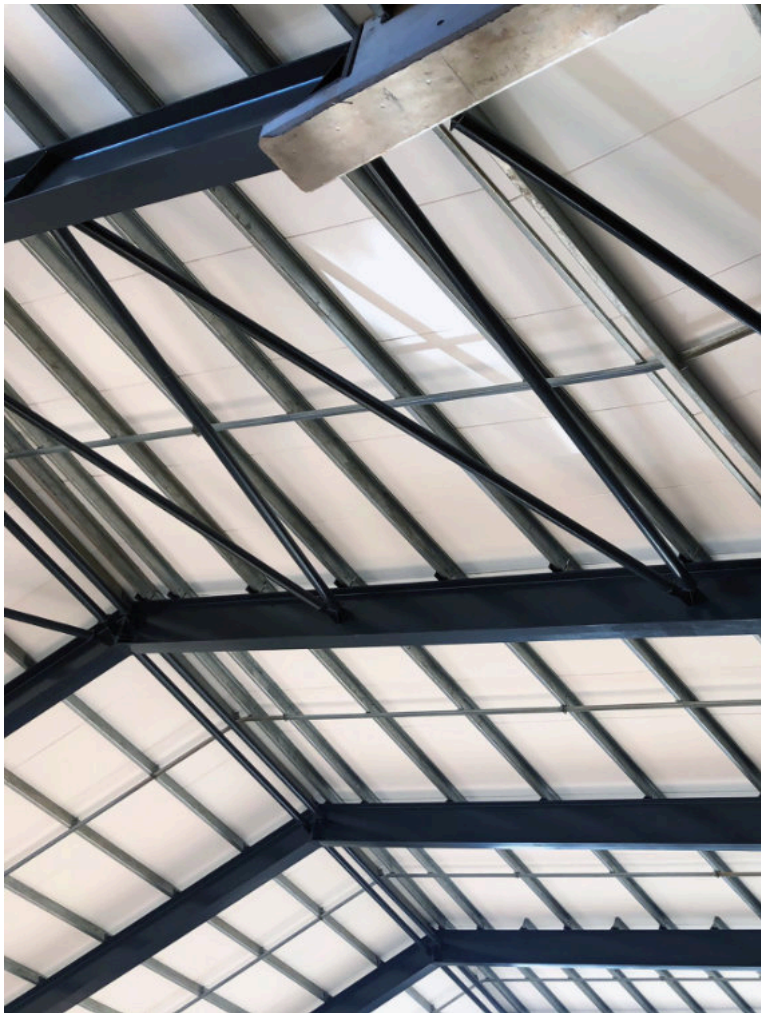
Trends and challenges

Driven not only by aesthetics, branding and durability considerations, the rise of cladding in South Africa has definitely not reached its peak, given that the equally strong trend towards solar photovoltaic panels on roofing will also drive cladding developments moving forward.

Further to this, locally we face the challenge of a market, divided into formal and informal sectors, the latter being driven purely by price - with structural integrity and durability frequently disregarded. Substitution of inferior materials rather than using those specified is rife - particularly in the emerging contractor sector. This is unfortunately damaging the industry as in the quest to be 'all things to all people', emerging contractors install cladding without using appropriately trained and experienced cladding contractors.

SAMCRA membership crucial

These factors only serve to highlight the crucial importance of membership of an industry body such as SAMCRA, and adherence to the quality standard which will soon be regulating the local cladding sector.



KES Aquatic Centre - winner of the Sports Facilities Steel Award, Steel Awards 2022 for its innovative roof structure and cladding

Other SAMCRA developments and CPD training

visit www.samcra.co.za

- **Developing standards for the region:**

  SAMCRA was invited to be a member of a technical committee for building regulations within the African Organisation for Standardisation (ARSO). We are looking forward to contributing to the ARSO technical committee to develop standards for the region that will enable trade in quality products between countries under the African Continental Free Trade Area (AfCFTA).

  SAMCRA has also been invited to assist in updating the National Building regulations.

- **SAMCRA will be presenting an advanced cladding workshops commencing in May, which will also count towards continuing professional development (CPD) points.**

- **SAMCRA will also present wholesaler / retail staff training on cladding materials and thicknesses.**

BSi STEEL
Forging Partnerships

+27 (0) 11 861 7600
INFO@BSISTEEL.COM
WWW.BSISTEEL.CO.ZA

BSI STEEL (PTY) LTD.
CORPORATE OFFICE GAUTENG:
ERF 24 FARM WATERVAL M61
KLIPRIVIER, GAUTENG 1451
SOUTH AFRICA
GPS: S26°26.074',E28°05.029'

OUR MISSION

We are a human centered, client-focused enterprise, dedicated to consistently delivering top quality steel at competitive prices.
We will invest in the lives of our people, the communities we live in and the sustainability of our environment.

WE WILL FORGE A STEEL ICON THROUGH ENDURING PARTNERSHIPS

ABOUT US

BSi Steel Pty Ltd was founded in 1985, for more than three decades we have forged a peerless reputation across South Africa as a trusted, reliable supplier. We now command a significant market share in steel distribution throughout South Africa and continue to grow our business on solid foundations. Our distribution platform has been structured to achieve optimum efficiency and excellent service to our wide spread clients. Kliprivier is our central distribution & processing warehouse that services both South Africa and our export markets.

OUR PRODUCTS

We stock a wide range of structural steel sections for the construction and mining industries. Products include Beams, Channels, Angles, Flat Bar, Square Bar, Round Bar & Reinforcing. We stock a wide range of Steel Plate in a number of steel grades, CQ, S355, Bennox, BSI400 & BSI500. We are one of the largest distributors of Flat Product including Hot Rolled, Cold Rolled, Galvanised & Colour Coated Coils. These are sold as Coil, Sheet, Slit & Blanks as required.

PROUDLY A LEVEL 4 B-BBEE CONTRIBUTOR IN SOUTH AFRICA

PROUD MEMBERS OF

SEIFSA

SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

SAPVIA
South African Photovoltaic Industry Association

CATEGORY

Factory, Warehouse and Metal Cladding

STEEL AWARDS 2023

BSi STEEL Forging Partnerships

Category Sponsor

Enhancing efficiency and sustainability

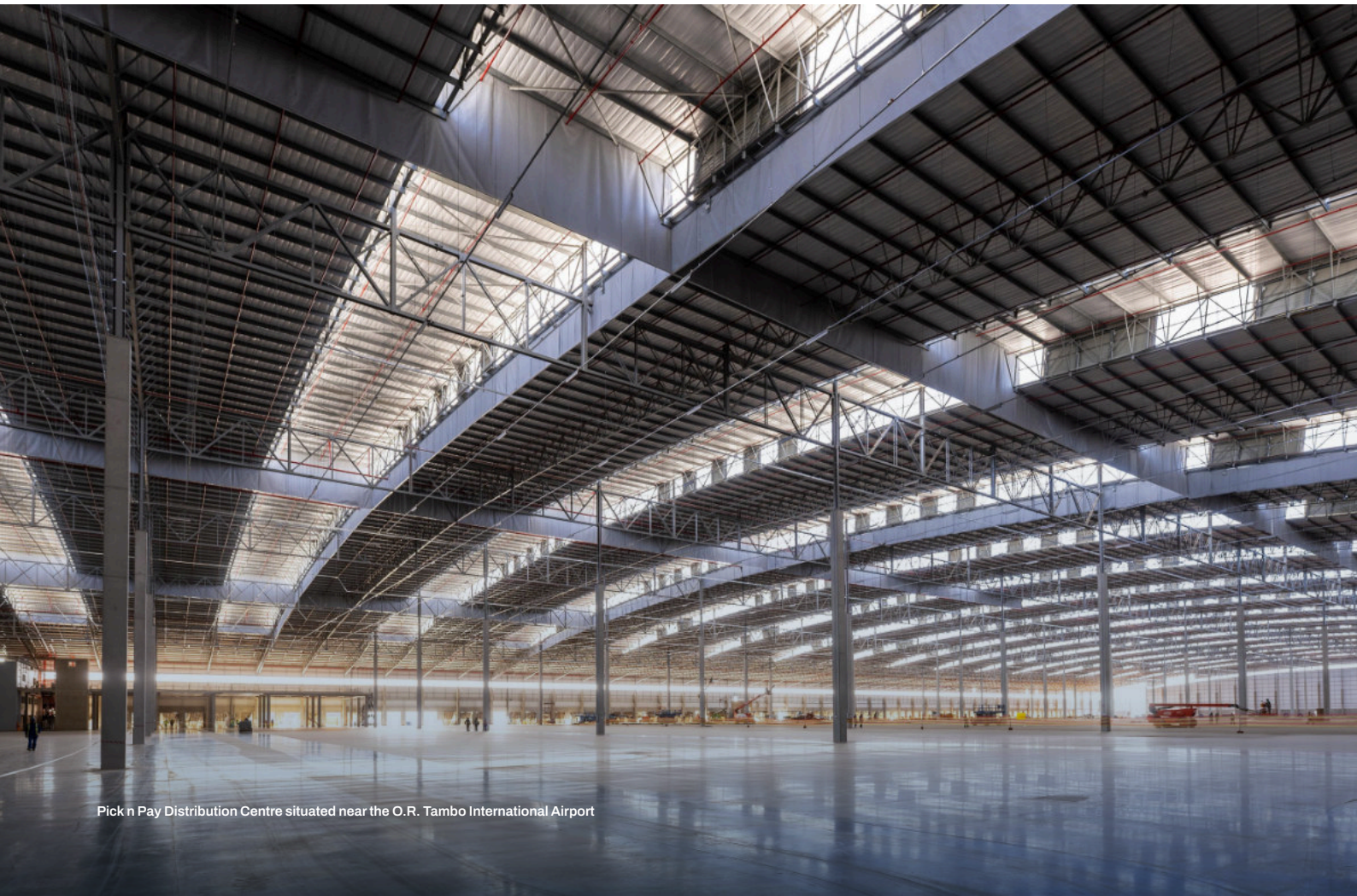
The BSI Steel sponsored Factory, Warehouse, and Metal Cladding category at the SAISC Steel Awards 2023, focusses on the practical benefits of structural steel and metal cladding in construction across South Africa and Africa.

In the realm of industrial architecture, material choices significantly impact project outcomes. Structural steel has become a cornerstone for factory and warehouse construction, primarily due to its durability and versatility.

Structural steel's core advantage lies in its robustness. It can withstand diverse environmental challenges, resulting in reduced long-term costs, lower maintenance requirements, and improved safety – critical considerations for African projects. Beyond durability, structural steel's adaptability is noteworthy. Architects and engineers can efficiently design space-efficient facilities that align with evolving industry needs. Additionally, steel's lightweight properties expedite construction, minimising project timelines and disruptions.

Metal cladding, an integral component of this category, offers practical advantages. It enhances thermal insulation, reducing energy consumption and improving ecological sustainability. Its customisable design options enable integration with local aesthetics and cultural nuances, harmonising these structures with their environments.

This Factory, Warehouse, and Metal Cladding category recognises the ingenuity of African engineering in harnessing the strengths of steel and cladding materials. Together, we advance towards more efficient, sustainable, and resilient industrial infrastructure on the continent.



Pick n Pay Distribution Centre situated near the O.R. Tambo International Airport

Winner
Pick n Pay Distribution Centre

STEEL AWARDS 2023

Innovation in Steel: Pick n Pay Distribution Centre Joint Winner of the BSi Steel Factory, Warehouse and Metal Cladding category at the SAISC Steel Awards 2023

The Pick n Pay Distribution Centre project has clinched the coveted BSi Steel Factory and Warehouse Category Award at the SAISC Steel Awards 2023. This remarkable achievement stands as a testament to the project's pioneering use of steel in an awe-inspiring logistics hub.

The Pick n Pay Distribution Centre is more than just a warehouse—it's an engineering marvel. Notably, it achieved a world record for roofing sheets spanning up to an astonishing 280 m. This accomplishment is a testament to the project's inventive approach to roofing, cladding, and, of course, steel.

Redefining long-span structures

One standout feature of the project is its incredible long-span design. With a column grid boasting 32 m in width and roof spans that exceed the length of a football field, this facility redefines the possibilities of long-span structures. The project's structural design challenged the norms of long-span construction. The design and engineering team employed innovative techniques, such as the double portal frame design with double-wide beams, to ensure the building's integrity and stability.

A collaboration of excellence

The success of the Pick n Pay Distribution Centre project would not have been possible without the remarkable collaboration of various teams, including structural engineers, steel fabricators, material suppliers, and roofing contractors. This teamwork was essential for problem-solving and adapting to the unique challenges posed by the project.

The teamwork displayed on this project was extraordinary. It was a true partnership of experts working together to overcome challenges and set records.

Record-setting roofing sheets

The project's achievement in roofing cannot be overstated. Roofing sheets of unprecedented lengths, ranging from 68 m to an incredible 280 m, were installed. These sheets were carefully manoeuvred onto the curved roof using new

techniques, showcasing the team's technical skill. Achieving world records for roofing sheet lengths required ingenuity and precision.

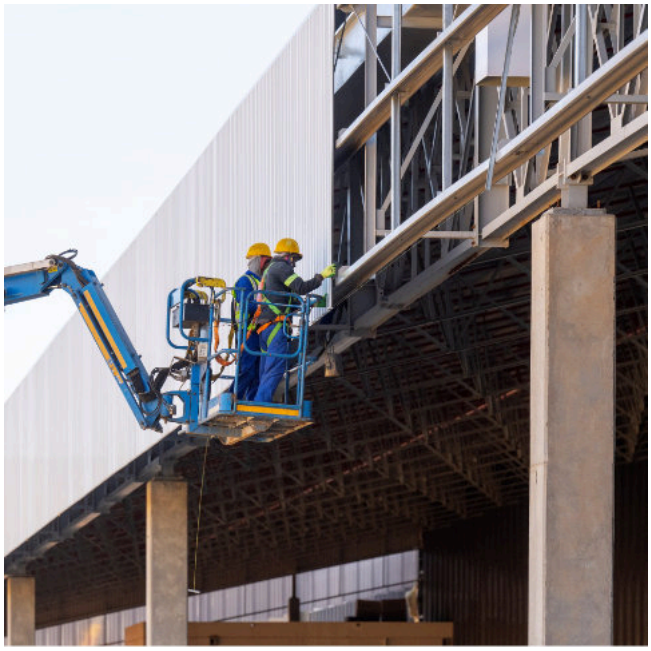
Cladding solutions and Guinness World Record

In addition to the world record for roofing sheets, the project secured a Guinness World Record for its innovative cladding solutions. The design incorporated monitors on the roofs, which required custom-designed flashings and back flashings. The use of advanced cladding materials and installation techniques further solidified the project's position as an industry trailblazer.

The cladding system incorporated insulated panels and custom flashings to seamlessly integrate with the roofing elements. This not only ensured weather-tightness but also contributed to the project's structural integrity.

A hub of unprecedented scale

The BSi Steel Factory, Warehouse and Metal Cladding category award recognises this project's contributions to steel construction and showcases its innovative design, structural engineering, and the successful collaboration of industry experts.



Situated near the O.R. Tambo International Airport, the Pick n Pay Distribution Centre project redefines what a logistics hub can be. Boasting a staggering 90 000 m² of dry goods warehousing, a substantial perishables facility, and a returns and recovery unit, the facility is a logistics behemoth.

PROJECT TEAM/DETAILS

Nominators
Macsteel, Cadcon

Client
Pick ‘n Pay / Fortress Logistics Real Estate

Architects
ICM Architectural Studio

Structural Engineer
Sotiralis Consulting Engineers

Steel Detailer
Mondo Cane

Main Contractor
WBHO

Steelwork Contractor
Cadcon / Leita Steel

Steelwork Erection / Construction / Installation
Cadcon, Leita Steel, GSE, Leibrandt Erectors and Dram Industrial Painting

Steel Merchants
Macsteel, BSi Steel, Allied Steelrode, Stewarts & Lloyds

Cladding Manufacturer
Safal Steel

Cladding / Roofing Roll Former / Profiler / Supplier
Macsteel Roofing

Cladding / Roofing Contractor
Tate & Nicholson

Project Completed
2023

Steelwork Completed
2022

Steel Tonnage
3400 tonnes

Steel Profiles Used
UB, UC, PFC, CHS, Angles

Cladding Completed
2023

Cladding Tonnage
1100 tonnes (201 000 m^2)

Cladding Material Used
0.5 mm AZ 100 G550 Colorplus®

Cladding Profile Used
Novotexi 440®

Winner
Mpumalanga Fresh Produce Market

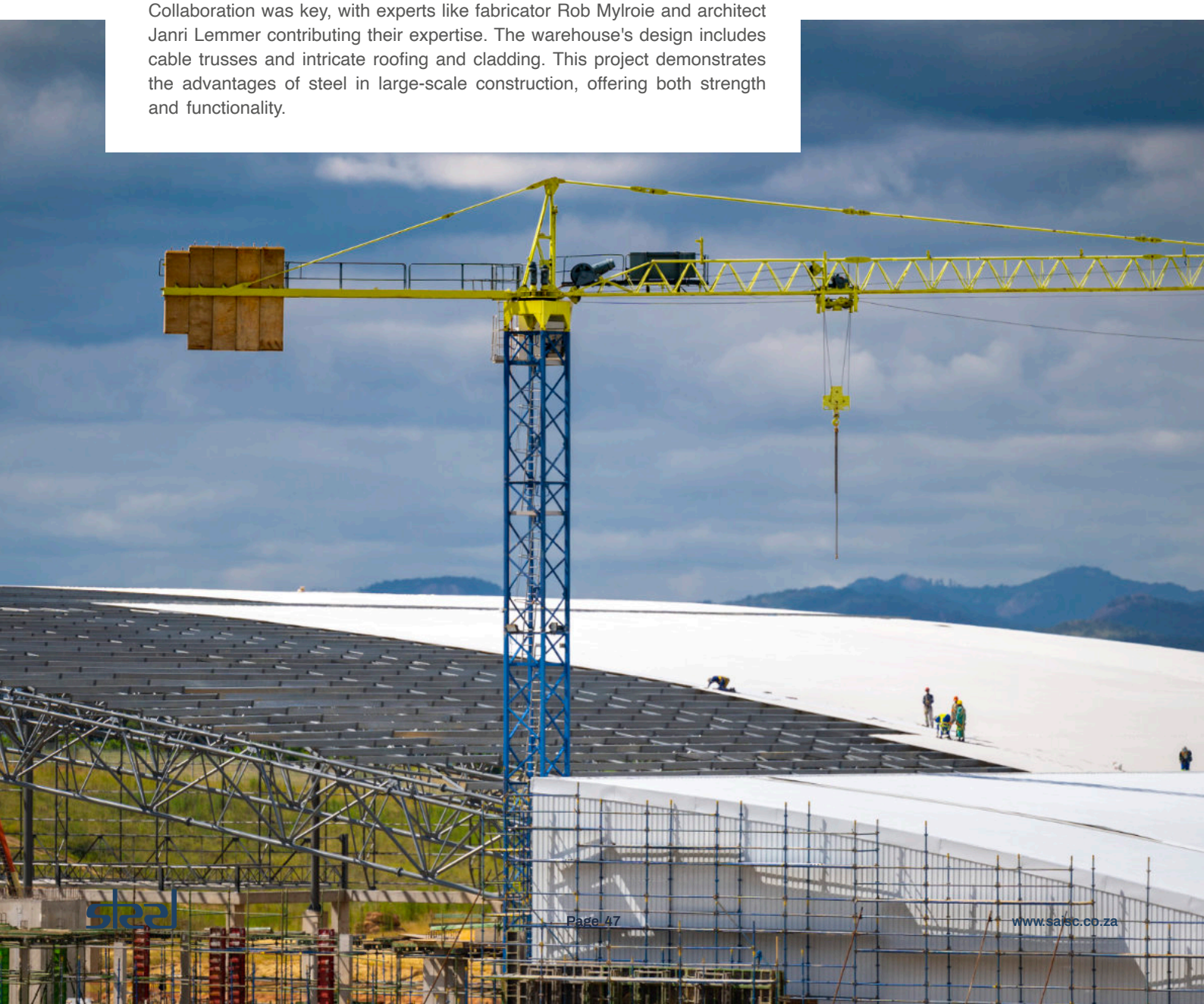
STEEL AWARDS 2023

Steel's strength and functionality in large-scale Construction

The Mpumalanga Fresh Produce Market, the Overall Winner of the SAISC Steel Awards 2023, and joint Winner of the BSi Steel Factory, Warehouse and Metal Cladding category, stands out for its innovative warehouse design.

Building 10, spanning 29 000 m², prioritises storage efficiency and an optimal microclimate for fresh produce. Structural Engineer Peter-Ben van Aswegen devised a three-dimensional tubular truss system with 70 m spans, minimising interior support columns.

Collaboration was key, with experts like fabricator Rob Mylroie and architect Janri Lemmer contributing their expertise. The warehouse's design includes cable trusses and intricate roofing and cladding. This project demonstrates the advantages of steel in large-scale construction, offering both strength and functionality.



Sculpting brilliance: how steel crafted success in Coca-Cola's Conco Warehouse project

The Coca-Cola Concentrates Warehouse in Eswatini has emerged as a beacon of steel innovation, receiving a commendation at the SAISC Steel Awards 2023. This project stands as a testament to the potential of steel, brilliantly brought to life through the collaboration of visionary design, meticulous fabrication, and cutting-edge construction.

Steel at the core of innovation

At the heart of this remarkable project is an intricate and ingenious steel framework. Yusuf Onia, Structural Engineer at Zutari, reflects on the project's design complexity, "We embraced a structural design featuring a plus girder system, ensuring vertical strength and stability. Lateral stability was achieved by introducing a moment frame at the gable ends, pushing the boundaries of steel's structural capabilities."

Steel's versatility shone as the project tackled the challenge of integrating ISO paneling across the facade and roof. This demanding task required precise engineering and meticulous detailing, resulting in a seamless and striking aesthetic.

Charmaine Bettersworth, Project Manager at Zutari, offers insights into the project's scope, stating, "Our responsibilities spanned a wide spectrum of engineering services, from mechanical to fire, structural, as well as civil engineering. We not only expanded the existing warehouse to 6000 m² but also relocated the truck entrance and built a new waste storage facility."

Steel breathing life into vision

The project's standout feature is the iconic Coca-Cola bottle structures that adorn the building's facade. Chris Francis, the project's fabricator, highlights the journey of turning architectural dreams into reality, "The Coke bottles were a stroke of design brilliance, and we were tasked with translating this concept into tangible steel structures. We meticulously crafted a plate-type skeleton frame for the Coke bottles, ensuring they bore the iconic Coca-Cola red finish."

The waste storage facility, designed to mimic a Coca-Cola bottle, introduced its own set of design challenges. Incorporating complex shapes and support structures required innovative engineering and precision construction. Onia elucidates, "We introduced stepped elements to accommodate the site's slope while maintaining structural integrity, all while mirroring the iconic Coke bottle shape."

Brand essence forged in steel

The Coca-Cola Concentrates Warehouse is more than a facility; it's a testament to the power of steel in embodying a brand's essence. With its corporate colours of Coke red, gray, and white, alongside Kingspan paneling, the facility delivers a bold and unmistakable statement. "The facility's design harmonises perfectly with the Coca-Cola brand. It's not merely a warehouse; it's a living embodiment of the brand's iconic imagery," notes Charmaine Bettersworth.

The gatehouse, featuring an eye-catching cantilevered design, adds another layer of visual appeal. The guest-related beam system and roofing were seamlessly integrated with steel columns, achieving both functionality and aesthetics.

Axel Kayoka, Steel Merchant at Macsteel, emphasises the pivotal role of collaboration in overcoming challenges. "Working across borders, this project presented logistical complexities. However, with flexible contractors and a dedicated team, we navigated these challenges seamlessly. The gatehouse scaffolding, for example, was indispensable for ensuring safety and accessibility during construction," says Kayoka.

Environmental responsibility and sustainability

Beyond its architectural brilliance, the Coca-Cola Concentrates Warehouse champions environmental responsibility. The facility has been designed to accommodate future expansion, demonstrating a commitment to sustainability. "We've incorporated sustainable practices into the project, aligning with Coca-Cola's dedication to environmental stewardship," adds Onia.

SAISC Steel Awards 2023 commendation

The Coca-Cola Concentrates Warehouse in Eswatini is a steel triumph, receiving a commendation at the SAISC Steel Awards 2023. This award recognises the exceptional synergy of design, fabrication, and construction that brought this project to fruition.

In the words of Chris Francis, "This project transcends the definition of a warehouse; it's a work of art, a symbol of what can be achieved when visionary design meets the strength and adaptability of steel."

PROJECT TEAM/DETAILS

Nominator and Steel Supplier
Macsteel

Client
Conco Eswatini

Architects
Building Design Group

Structural Engineer
Zutari

Steel Detailer and Steelwork Contractor
IFA Engineering

Steel Merchant
Macsteel

Cladding Manufacturer / Roll Former / Profiler
Kingspan Insulated Panels Manufacturing LLC, Safintra Nelspruit

Project Completed
March 2023

Steelwork Completed
January 2023

Steel Tonnage
293 tonnes

Steel Profiles Used
Universal beams, universal columns, equal and unequal angle iron, lipped channel, channel iron and plates

Cladding Tonnage
100.4 tonnes

Cladding Material/ProfileS Used
Safintra 0.55 mm thick SAFLOK 700 Colorplus® AZ150 and IBR 0.55 mm AZ150

Breaking boundaries in design and engineering: The Irene Link project's unique structural steel and cladding Innovations

The Irene Link Project, located in an expansive precinct, presented a unique set of design challenges and objectives. The primary objective was to maximise space utilisation on the site, which ultimately led to the creation of a shopping centre encompassing retail shops, restaurants, and a drive-thru. A critical design element involved blending 60% brick wall facades with 40% vertical cladding sheeting and numerous canopy roofs, all featuring rounded corners. The absence of sharp vertical corners on the buildings and canopies added an exceptional visual appeal.

Structural engineering innovations

The structural engineering aspect of the project played a pivotal role in realising the unique design. The steelwork, completed in August 2022, involved a substantial 265 tonnes of structural steel, forming trusses, columns, and beams. The challenge was to seamlessly integrate the curved lines of the architectural facade into the cladding and steel structure. This demanded precision and expertise.

The use of structural steel allowed for expansive open spaces within the shopping centre. The broad spans could only be achieved with steel. Concrete columns were used to meet the requirement for an exposed concrete front beam, a key design element of the project.

Cladding solutions

The cladding for the Irene Link project was carefully selected to align with both aesthetics and functionality. The choice of cladding material and profiles significantly contributed to the project's visual appeal. Moreover, it helped mitigate concerns related to oil canning, a common issue with metal cladding.

Construction challenges and solutions

The construction phase of the project presented a unique set of challenges. Limited site access posed difficulties in transporting materials and erecting structures. Navigating varying radius curves throughout the design required precision and attention to detail. Despite these obstacles, the project was successfully completed with effective problem-solving.

Achievements

The Irene Link project pushes the boundaries of design and construction. The collaboration among architects, engineers, and construction specialists resulted in a shopping centre that defies convention with its curved lines, rounded corners, and innovative use of structural steel and cladding. This project serves as a testament to the possibilities of contemporary engineering and design, offering both functionality and striking aesthetics.

PROJECT TEAM/DETAILS

Nominators and Cladding Supplier
Global Roofing Solutions (GRS)

Client
Abfund/ CRH Invest. / Giflo Prop. / Lightside Invest. / SOM

Architects
Boogertman & Partners Architects

Main Contractor
Gothic Construction

Structural Engineer
Streng Consulting Engineers / DG Consulting Engineers

Steel Detailer
RSB Contracts / Streng Consulting Engineers / DG Consulting Engineers

Steelwork Contractor
RSB Contracts / Streng Consulting Engineers

Cladding Manufacturer
Global Roofing Solutions (GRS)

Cladding / Roofing Roll Former / Profiler / Supplier
Global Roofing Solutions (GRS)

Cladding / Roofing Contractor
Nok Roofing

Project Completed
December 2022

Steelwork Completed
August 2022

Steel Tonnage
265 tonnes

Cladding Completed
September 2022

Cladding Tonnage
80 tonnes (15 000 m²)

Cladding Material Used
ArcelorMittal® SA Chromadek® 0.58 mm thick material

Cladding Profile Used
Klip-Tite™ from Global Roofing Solutions (GRS)

Forging a new frontier: architects and structural engineers “steel” the show in the JT Ross Northfields project

An exceptional collaboration between architects and engineers has given rise to a project that shines a light on the remarkable potential of steel in contemporary construction and has ben awarded a commendation in the BSi Steel Factory, Warehouse and Metal Cladding category of the SAISC Steel Awards 2023. The JT Ross Northfields project, located on former sugarcane lands in KwaZulu-Natal, South Africa, shows just how steel can be used to reshape landscapes.

Led by architects Mike Shaw and JP, and guided by structural engineer Dave Viger, the JT Ross Northfields project showcases the revolutionary possibilities made possible by steel. The project, backed by JT Ross Properties, encompasses an impressive 166 000 m² of adaptable space, housing a diverse range of purpose-driven buildings.

"Steel's unparalleled versatility played an instrumental role in shaping the essence of the JT Ross Northfields project," noted Mike Shaw, architect. "From project inception, we recognised the need for a material that could blend functionality and aesthetics, and steel emerged as the natural choice."

The project's structural innovation and efficiency are the outcomes of a carefully calculated approach. "Our structural blueprint centred on strategic foundations, complemented by purposeful pile caps to address the challenges of the terrain," said Dave Viger, Structural Engineer. "Steel's rapid erection capabilities allowed us to achieve unprecedented construction timelines," highlighted Mike Shaw. "We introduced intricate angles, louvers, and steel projections, creating an aesthetic that seamlessly converged with functional prerequisites."

Amidst the technical triumphs, the project's steel utilisation significantly impacted the local economy. "The JT Ross Northfields project served as a catalyst for economic expansion in the region," remarked Andre Procter of JT Ross Properties. "Not only did it breathe new life into the landscape, but it also attracted business enterprises and investments, elevating the area into a thriving economic epicentre."

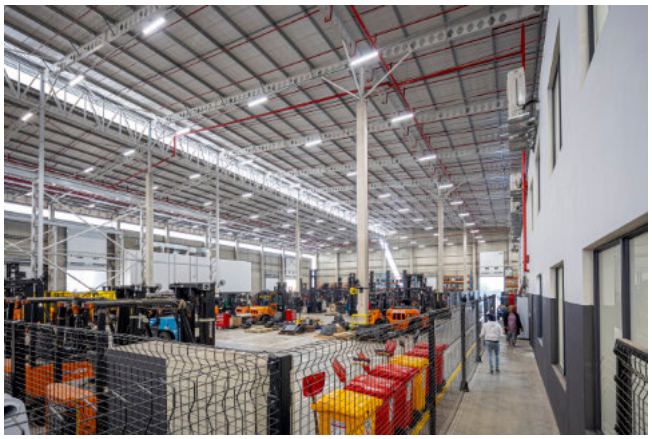
The project's considered approach extends to every facet, including innovative solutions for louvers and sheeting challenges. "We encountered hurdles such as wind loads


RHENUS
LOGISTICS

and sheeting expenses, but our collaborative ethos led to inventive resolutions," shared Dave Viger. "We introduced concealed fix clips to bolster sheeting endurance against wind forces and devised gutter systems to safeguard louvers against leaks."

"The JT Ross Northfields project shows the capabilities of modern engineering and the possibilities that steel affords," remarked Mike Shaw. "It's a project that not only meets functional needs but also leaves behind a lasting architectural legacy that will inspire future generations."

The JT Ross Northfields project raises the bar for construction, showing how blending architectural vision and engineering expertise can shape landscapes and improve communities.



PROJECT TEAM

Nominator and Architects
Axiom Arc Architects

Client
JT Ross Property Group

Main Contractor
WBHO

Structural Engineer
Vigar and Associates

Steelwork Detailer and Contractor
Impact Engineering

Steel Merchants
Macsteel (Durban)

Cladding Manufacturer
Macsteel (Durban)

Cladding Roll Former / Profiler / Supplier
Macsteel (Durban)

Cladding / Roofing Contractor
Impact Engineering

PROJECT DETAILS

Project Completed
April 2023

Steelwork Completed
October 2022

Steel Tonnage
3161 tonnes

Steel Profiles Used
Castellated beam (Main) and truss type structure

Cladding Completed
November 2022

Cladding Tonnage
1243 tonnes (207 160 m²)

Cladding Material Used
Colorplus® AZ 00 (MAIN) and Colorbond® AZ200

Cladding Profiles Used
Roofing - Novotexi 440®
Side Cladding – Widespan 762

Stewarts & Lloyds

Market Leader in Several Industries

Steel & Tube | Pipes & Fittings | Valves | Pumps | Irrigation | Fencing | Roofing | Hardware

Stewarts & Lloyds is a leading steel, tube, and engineering product supplier in South Africa. Our markets include light and general engineering, mining, rural water, chemical, petrochemical, automotive, agriculture, water reticulation, building and construction, fire protection, and local authorities.

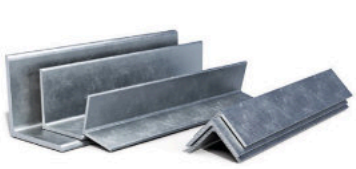
The group operates 34 branches throughout Southern Africa and recently opened a branch in Windhoek Namibia. Stewarts & Lloyds supplies steel and tube, pipe and fittings, valves, pumps, irrigation, fencing, profiling, and roofing products. Retail outlets at each branch sell a broad range of products, including pumps, generators, wires, valves, irrigation, fencing, and industrial hardware.

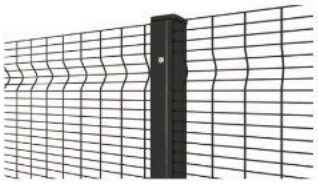
In 2023, Stewarts & Lloyds celebrates its 120-year anniversary. The company was established in Kimberley, where operations jointly began with Cape Town under the Lloyd & Lloyd name in 1898. It was later known as Stewarts & Lloyds (South Africa) Limited in 1903.

Stewarts and Lloyds' long-standing history of providing quality products has enabled it to build a loyal customer base that trusts the brand and its products. The company is committed to providing the highest service to its customers. It continually invests in its staff and branch network, ensuring customers have access to the highest quality products and advice.

STEWARTS & LLOYDS

Your **National One-Stop** Shop
FOR A **VAST RANGE**
of **PREMIUM STEEL** PRODUCTS



EQUAL ANGLE | CORRUGATED & IBR SHEETING | ROUND & SQUARE BAR | FENCING | COIL | HOT ROLLED SHEET | STRUCTURAL TUBE
COLD ROLLED SHEET | GALVANISED SHEET | CUT TO LENGTH LINE | STEEL PLATE | REINFORCING BAR | LIP CHANNEL | COLUMN, BEAM & CHANNEL

Head Office: Bedfordview
T: 0860 102 799
E: info@sltrading.co.za
www.stewartsandlloyds.co.za

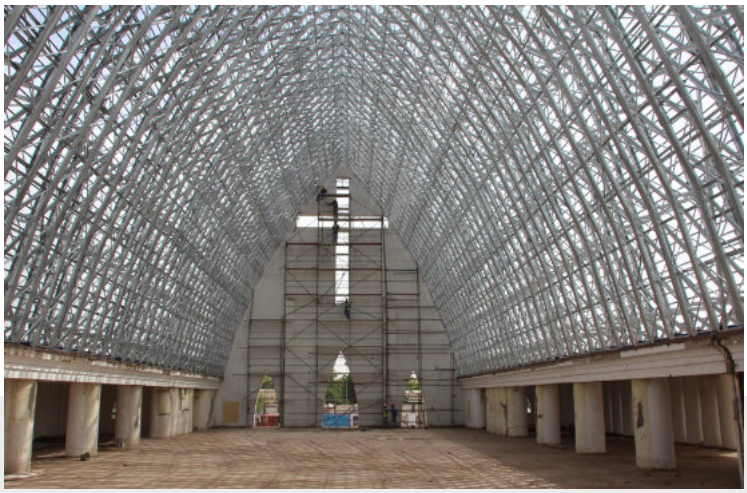
A Trusted Name.
An Established Reputation.

120 YEARS ANNIVERSARY

NATIONWIDE BRANCH NETWORK: *Alrode South | Bloemfontein | Boksburg | Booysens | Brits | Durban | Epping | George | Kimberley | Klerksdorp Mahikeng | Nelspruit | Pipes, Fittings & Valves (Alrode) | Polokwane | Port Elizabeth | Pretoria | Projects & Contracts (Germiston) | Pumps & Irrigation (Longmeadow) | Robertville | Rustenburg | Springs | Steel & Tube (Wadeville) | Vaal | Vereeniging | Wetton | Witbank | Wynberg | **Namibia***

Light Steel Frame Buildings

Category Sponsor



Innovating construction with light steel frame building:

Shaping Africa's architectural landscape

The Light Steel Frame Buildings category, sponsored by Stewarts & Lloyds, at the SAISC Steel Awards 2023, invites us to explore the remarkable benefits of light steel frame construction. In this segment, we delve into how this innovative construction method is transforming Africa's architectural landscape.

In the dynamic world of construction, innovation is key, and light steel frame building has emerged as a pioneering force. It is reshaping architectural landscapes, offering a myriad of advantages that redefine the way we envision and construct structures.

At the heart of light steel frame building is its agility. This versatile construction method empowers architects and engineers to design buildings that blend creativity with efficiency. From residential homes to commercial spaces, light steel frame structures exhibit sleek aesthetics, precision, and sustainability.

Durability is the hallmark of this construction technique. Light steel frame buildings excel in the face of environmental challenges, ensuring longevity and minimal maintenance. Safety remains paramount, with steel's inherent strength offering peace of mind for occupants and investors alike.

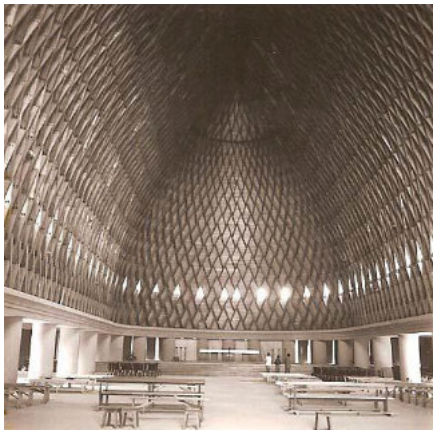
Efficiency is a core tenet of light steel frame building. Its lightweight properties expedite construction timelines, reducing on-site disruptions and optimising overall project efficiency. This innovation extends to sustainability, as reduced energy consumption and construction waste make it an environmentally responsible choice.

As we celebrate the achievements of those who have harnessed the potential of light steel frame construction, we acknowledge the industry's commitment to innovation, excellence, and progress.

Winner
Our Lady of Peace Cathedral

STEEL AWARDS 2023

Rising from the ashes: the Our Lady of Peace project showcases the elegance of light steel



The historical Our Lady of Peace structure, after its tragic destruction by fire, has now been reborn. Through the meticulous use of steel, this edifice stands not only as an architectural marvel but also as a testament to the community's indefatigable spirit.

A phoenix reborn

The devastating fire left a void, and the challenge was to blend homage to history with innovative design. The seamless integration of steel encapsulated both these aspirations.

Steel offers more than just structural integrity for this type of project; it provided a canvas on which to paint a tribute to the past, while allowing the project team to forge ahead into the future with innovation.

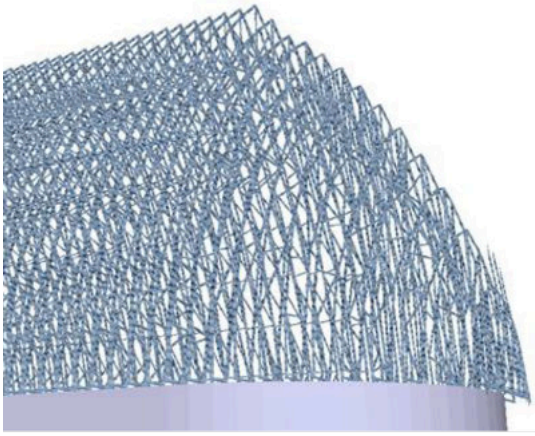
Innovation and application: The steel chronicle

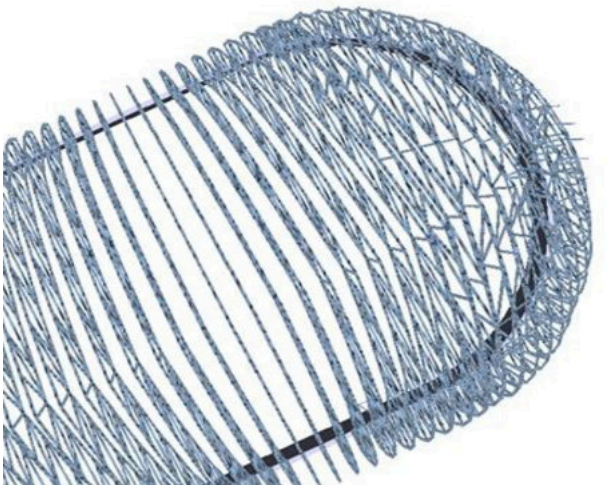
Key features of the steel's application in the project are:

Customisation: Light Steel Frame Ultra Span profiled sections were specifically tailored to align with the unique architectural vision of the project.

Sustainability: The project exemplifies steel's recyclability, reinforcing an eco-friendly construction approach.

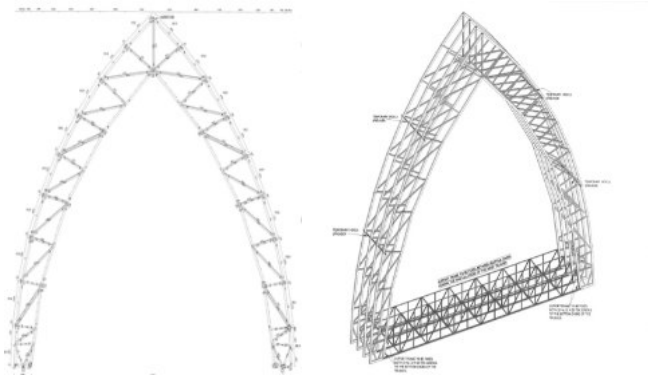
Durability: The structure's resilience is amplified by steel's inherent properties.





Transportation and erection: Steel's Voyage

The juxtaposition of steel's lightness with its robust strength streamlined transportation logistics. In the erection phase, pre-fabrication techniques ensured accuracy, efficiency, and a reduced environmental footprint. This approach markedly minimised disruptions and expedited construction phases.



Melding past and present

Bridging epochs required unmatched engineering expertise. The structure, while reverberating with the essence of its predecessor, incorporated state-of-the-art safety and design features.

Advanced 3D modelling and simulation tools facilitated this architectural harmony. The result was a blend of timeless aesthetics and contemporary engineering.

The culmination

The recognition at the SAISC Steel Awards 2023 in the Light Steel Frame Building Category is a testament to the projects innovation in the use of light steel. "This acknowledgment mirrors our dedication to pushing boundaries in design and construction," expressed project manager, David Brown.

Blueprinting tomorrow with steel

The tale of Our Lady of Peace is a clarion call to architects and engineers alike, proving the multifaceted potential of steel. As showcased, steel promises to play a pivotal role in crafting architectural marvels in the future.

PROJECT TEAM/DETAILS

Nominator and Structural Engineers
MiTek Industries

Client
Catholic Church, Chad

Architect
Groupement BEX

Main Contractor
Sotieri Construction

Steel Detailer
MiTek Industries

Steelwork Contractor
MaxSpan Roofing

Project Completed
December 2022

Steelwork Completed
June 2022

Steel Tonnage
120 tonnes

Steel Profiles Used
MiTek Ultra-Span

YOUR FIRST CHOICE... FOR STEEL , PAINT & HARDWARE

NJR Steel has grown from a single operation in the 1980's to a group of companies that now manufacture and distribute steel products and value added services, through our network of 26 operational businesses located countrywide.

All our NJR Steel branches offer a wholesale and retail steel service, and our retail shops are fully stocked with steel and related paint and hardware products, providing our customers with a fast and friendly shopping experience.

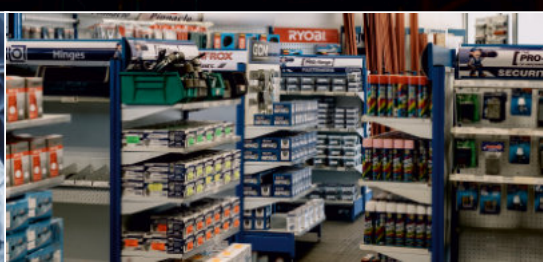
Whether you are an owner builder, building contractor, or planning a DIY experience, we believe that no project is too big or too small for NJR Steel.

Now also in Cape Town

13 Bertie Avenue
Epping Industria
021 054 9039

26 Branches in 7 Provinces!

Proudly supplying steel to the following industries:
Agriculture • Civils • Construction • Engineering • Fabrication • Manufacturing
Mining • Security • Signage • Truck & Trailer • Hardware & Building Merchants



Trusted since 1980

www.njrsteel.co.za

To view our online catalogue, or to request a quote, please visit our website www.njrsteel.co.za

njr steel
first for steel

njr steel
first for steel

Category Sponsor

Empowering innovation and sustainability: the role of steel construction

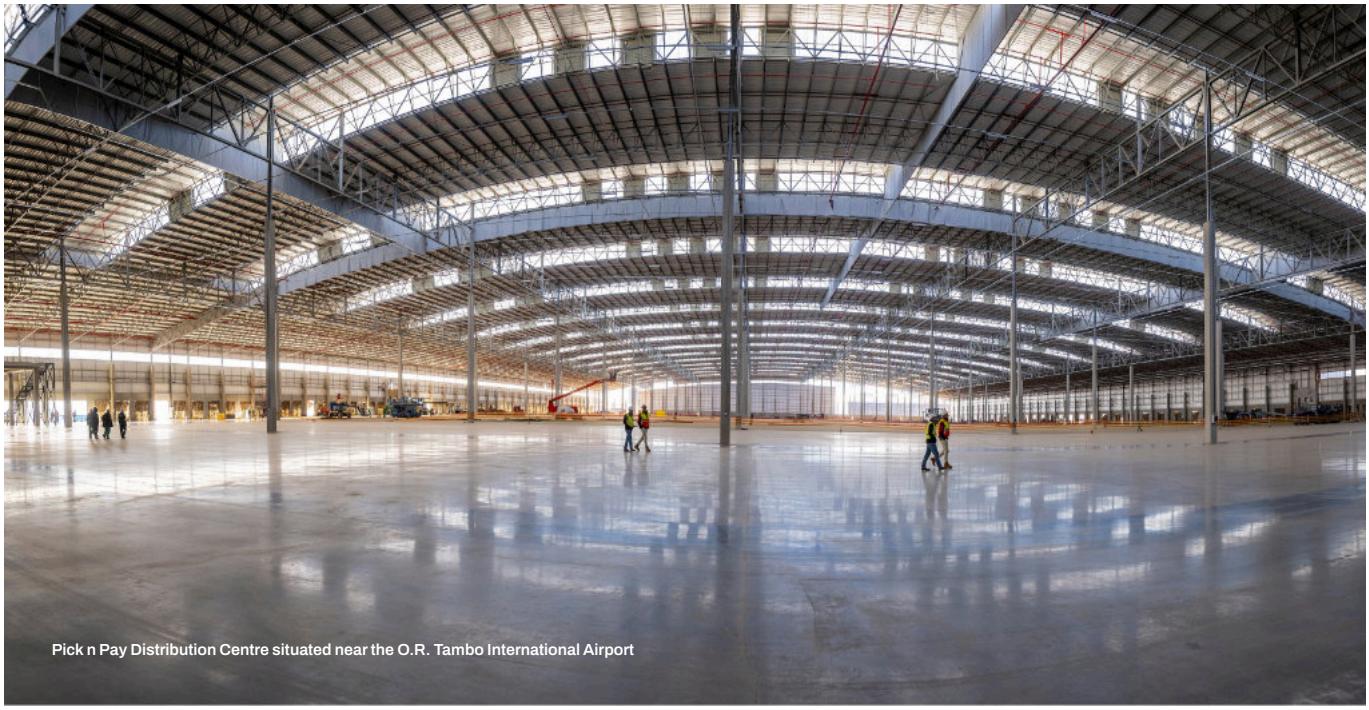
The Innovation and Sustainability project category, proudly sponsored by NJR Steel, at the SAISC Steel Awards 2023, explores the power of steel construction in driving innovation and sustainability. The projects in this category show the many ways in which steel, a material synonymous with strength and adaptability, serves as a catalyst for progress in the construction industry.

Innovation is the lifeblood of any thriving sector, and steel construction stands at the forefront of fostering new ideas and approaches. Its inherent flexibility allows architects and engineers to push the boundaries of what's possible, enabling the creation of structures that blend aesthetics, functionality, and efficiency.

Beyond innovation, steel construction is a linchpin in the pursuit of sustainability. As global environmental concerns intensify, the construction industry plays a pivotal role in addressing these challenges. Steel, with its recyclability and minimal environmental impact, aligns perfectly with the evolving emphasis on sustainable construction practices. It forms the foundation for eco-friendly buildings and infrastructure projects that minimise their carbon footprint and resource consumption.

Moreover, steel's durability ensures that the structures it supports have a long-lasting impact, reducing the need for frequent replacements and repairs. This inherent resilience translates into reduced life cycle costs and a more sustainable approach to construction.

We acknowledge the industry's commitment to pushing the boundaries of what is possible. The SAISC Steel Awards 2023 celebrate projects that demonstrate the synergy between innovation and sustainability, firmly establishing steel construction as a driving force in shaping a brighter and more sustainable future for South Africa and beyond.



Pick n Pay Distribution Centre situated near the O.R. Tambo International Airport

Winner
Pick n Pay Distribution Centre

The Pick n Pay Distribution Centre project is a beacon of innovation and sustainability in steel construction, winning the BSi Steel Factory, Warehouse and Metal Cladding category award, the NJR Steel Innovation and Sustainability category award, as well as the Best Regional Project Gauteng category award at the SAISC Steel Awards 2023.

The project's standout feature is the use of steel in creating remarkably long-span structures, challenging conventional norms. Progressive techniques like the double portal frame design were employed to ensure structural stability. The project secured a Guinness World Record for roofing sheets spanning up to an astonishing 280 m. The Pick n Pay Distribution Centre sets a new standard for sustainable innovation in steel construction.

For a complete project overview visit pages 44 - 46

Commendation
Northam Zondereinde 3 Shaft

The Northam Zondereinde 3 Shaft project has been celebrated with a commendation at the SAISC Steel Awards 2023, acknowledging its groundbreaking achievements in the realm of mining engineering. This project involved the design, fabrication, and installation of an advanced headgear complex for Northern Platinum, showcasing modular innovation and precision steelwork that surpassed industry standards.

The project's impact extends to advancing mining technology by providing access to deeper deposits, enhancing safety, and promoting sustainable practices. The SAISC Steel Awards commendation serves as an inspiration for the mining engineering community, emphasising the potential for safer, more efficient, and sustainable mining practices through modular design and precision steelwork.

For a complete project overview visit pages 27 - 29

Association of Steel Tube and Pipe Manufacturers of South Africa (ASTPM)

Industriously manufacturing and supplying the South African downstream steel industry with quality and internationally accredited carbon steel tubes and pipes.

In 1983, the **Association of Steel Tube and Pipe Manufacturers of South Africa** was established with the purpose of representing producers of welded carbon steel tubes and pipes. Our member companies collectively account for more than 70% of the total installed capacity in this industry.

Over the course of the Association's four-decade existence, our members have steadfastly supported the local market while also exporting more than 1.5 million tons of tube and pipe products to over 50 countries. This remarkable achievement is attributable to the exceptional quality of the products manufactured by our members, which adhere to both local and international specifications.

ASTPM remains committed to promoting the use of tube products and actively works to ensure the maintenance and enhancement of local standards to meet both local and international requirements.

Our member companies continue to invest in the industry, particularly in value-added machinery such as plasma and laser cutting technology. These advancements have made our products more user-friendly, with streamlined connections that save time and reduce labor costs for fabricators and erectors. This efficiency enables them to pass on cost savings to their customers.

ASTPM

The objectives of the ASTPM are to:

- Promote the domestic use of welded carbon steel tubes and pipes
- Promote localisation and its implementation
- Promote import replacement of downstream products
- Promote quid pro quo co-operation among members without collusion

CONTACT US

astpm@astpm.com
+27 (0)12 003 2878
www.astpm.com

ASTPM

Category Sponsor

Pioneering Progress in Tubular Steel Construction

St Johns Aquatic Centre Roof

In the realm of structural engineering, the choice of materials profoundly influences the outcome of projects. Tubular steel construction has emerged as a game-changer, redefining the possibilities in architectural and engineering landscapes.

The fundamental advantage of tubular steel lies in its versatility and strength. It offers a dynamic canvas for architects and engineers to craft innovative structures that defy traditional boundaries. From soaring skyscrapers to elegant bridges and intricate industrial facilities, tubular steel provides the structural backbone for iconic landmarks across Africa.

Durability is at the heart of tubular steel's appeal. It thrives in diverse climates, from the scorching deserts to the humid tropics, delivering longevity and resilience. The ability to withstand challenging environmental conditions not only ensures the structural integrity of projects but also reduces long-term maintenance costs.

Tubular steel's adaptability shines in its ability to facilitate efficient designs. Lightweight yet robust, it reduces construction timelines whilst optimising project efficiency.

This efficiency extends beyond construction to the operational phase, where tubular steel's reliability continues to shine.

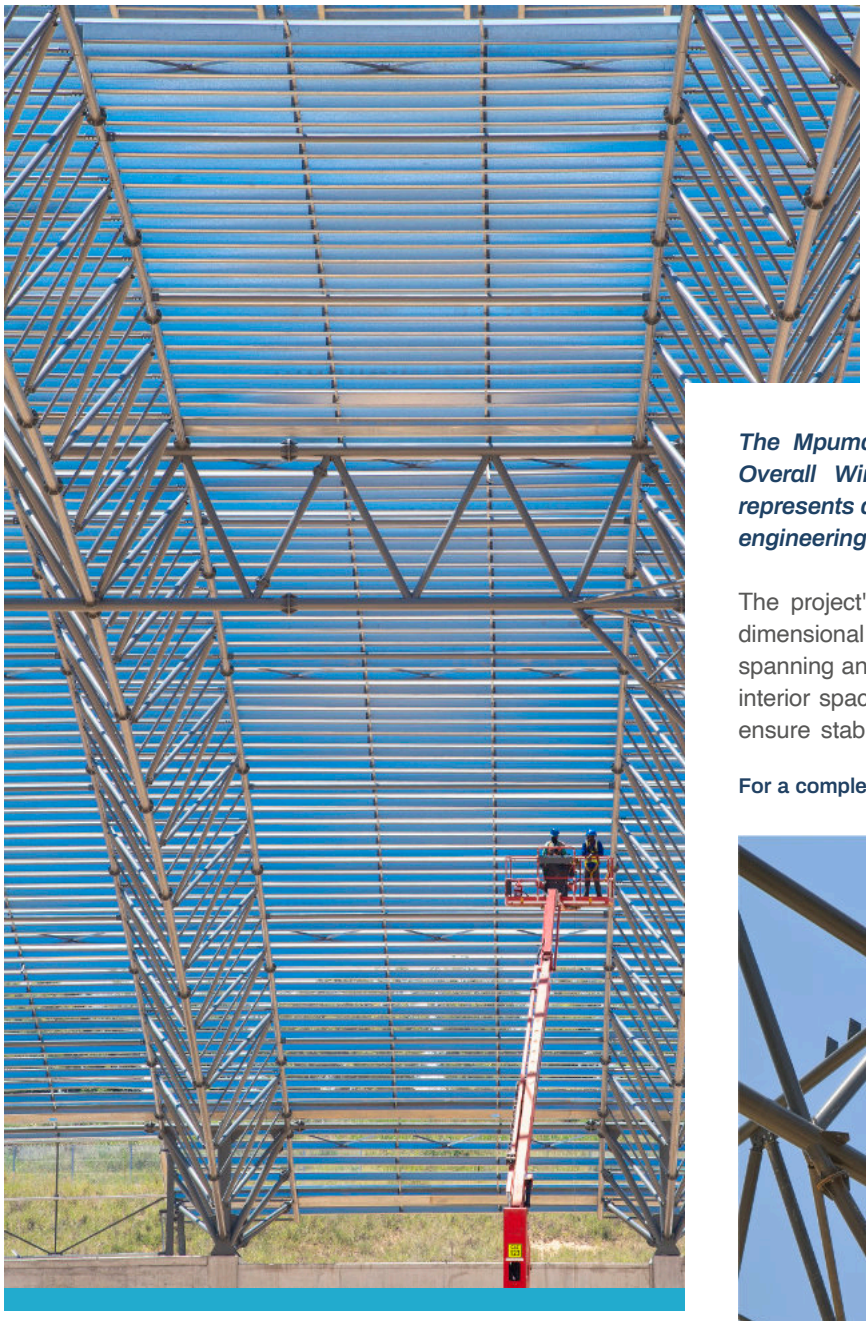
Moreover, tubular steel embodies sustainability. Its recyclability aligns seamlessly with global environmental priorities, while its inherent strength and low maintenance needs contribute to a reduced carbon footprint.

The SAISC Steel Awards 2023 Tubular Steel category, sponsored by the Association of Steel Tube and Pipe Manufacturers of South Africa (ASTPM), shine a spotlight on projects that have elevated the art of construction using tubular steel to advance the architectural and engineering landscapes.

Join us in this exploration of innovation and accomplishment as we recognise the projects and individuals who have firmly established tubular steel construction as a catalyst for progress and architectural excellence on the African continent.

Winner
Mpumalanga Fresh Produce Market

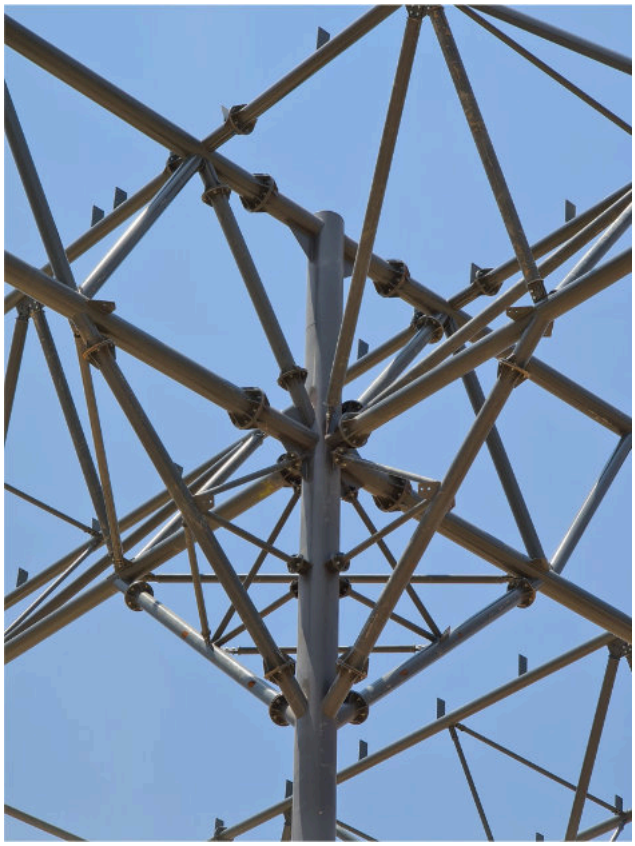
STEEL AWARDS 2023



The Mpumalanga Fresh Produce Market, awarded the Overall Winner of the SAISC's Steel Awards 2023, represents a remarkable achievement in architectural and engineering excellence.

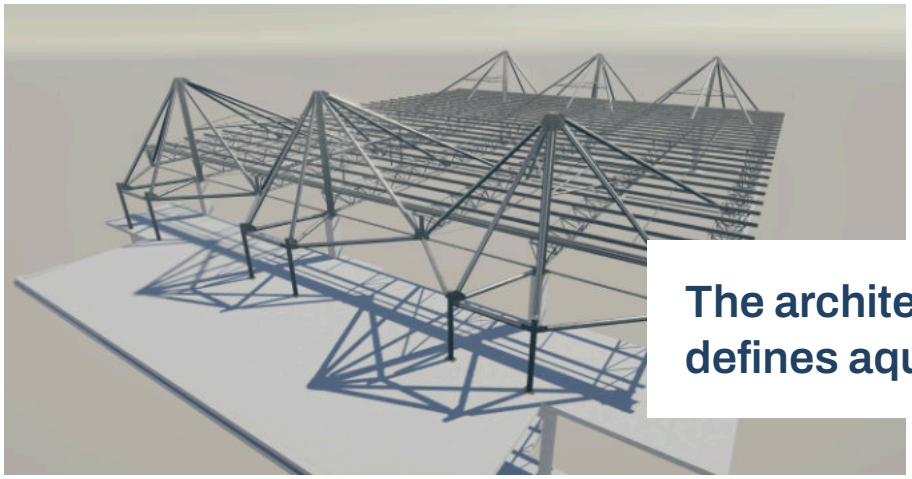
The project's structural prowess lies in a visionary three-dimensional tubular steel truss system, with each truss spanning an astounding 70 m, providing an obstruction-free interior space. Transfer trusses and concrete portal frames ensure stability and manage horizontal forces.

For a complete project overview refer to pages 21 - 24



Commendation
St John's Aquatic Centre Roof

STEEL AWARDS 2023

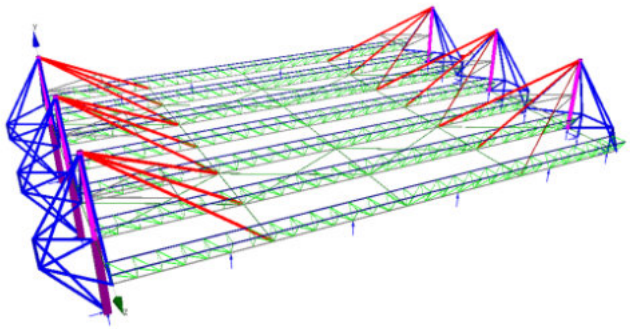


The architectural jewel that defines aquatic infrastructure

The roof at St John's Aquatic Centre, which received a commendation in the 2023 Steel Awards by the Southern African Institute of Steel Construction, shows how good design can meet solid engineering. The architectural design of the new Aquatic Centre honours the heritage, aesthetic, and existing historical buildings of St John's College.

Journey from conception to realisation

The idea to refurbish the St John's Aquatic Centre had been germinating for several years. Initially, the goal was straightforward: an open water polo pool with new change rooms and bathrooms nestled beneath a spectator-friendly



grandstand. When fundraising for this initial concept met challenges, it catalysed the search for a grander vision.

The pivot came in 2019. A seasoned architect introduced the vision of a fully enclosed water polo arena to ensure year-round usability. Recognising the gap, especially since the centre previously lacked the facilities to host significant tournaments, this was an idea whose time had come.

Yet, with innovation come challenges. The roofing structure had to be discreet, ensuring it did not diminish the nearby heritage school facade. Another adjacent building required its share of northern sunlight. Furthermore, the roof's height from the water had to align with international tournament standards.

Designing a Remarkable Floating Structure

The task was to create a roof that, while spanning across the pool and grandstands, seemed to float above the water. The solution? A low-profile steel girder design covering an impressive 2 300 m². This harmonious blend of art and engineering produced an indoor water polo facility that is a sight to behold.

The engineering specifics are equally awe-inspiring. The steel framework, with a depth of approximately 1.5 m, spans 48 m. Through the innovative use of reverse columns, or "stays," anchor points were devised to support this vast structure. These structural elements were carefully positioned to ensure unobstructed sunlight and views for nearby buildings.

Material choices perfectly meshed aesthetics and function. Circular hollow sections, proficient in handling high compression forces, became a visual signature of the project. Despite constraints, a one-degree slope for the roof was achieved, ensuring its efficiency with no reported water logging or leakages.

As it stands today, the St John's Aquatic Centre Roof project is a testament to the harmonious blend of innovation, aesthetics, and functionality. It's not merely a structural accomplishment but a space of legacy — where athletes shape their futures and spectators cherish memories.

PROJECT TEAM/DETAILS

Nominator and Steelwork Contractor
Tass Engineering

Client
St John's College

Architects
Cimato Moroldo Architects & Interiors

Structural Engineer
Astratto Engineering

Steel Detailer
3D Struct

Main Contractor
Barrow Construction

Fabrication, Erection and Installation
Tass Engineering

Project Completed
December 2022

Steelwork Completed
September 2022

Steel Tonnage
75 tonnes

‘Welded’ to cutting-edge service

The Bolt and Engineering Distributors (B.E.D.) Group is proud to host one of the finest welding and cutting operations in the country, manned by a team with over a century’s combined welding and cutting experience. Based at the welding and cutting repair centres of the Wadeville and Cape Town branches, the team works countrywide as required.

One-stop welding and cutting

Craig Bister, Welding & Cutting Division Manager Bolt and Engineering Distributors (B.E.D) Group

Cutting, Welding and Brazing Product Specialist, Manager Craig Bister explains: “People in the industry are very aware of the B.E.D. Group’s core expertise in fasteners. Over time, we have grown our complementary product and service offerings. Today, these include a well-established one-stop welding and cutting division, which successfully provides a wide portfolio of locally-produced as well as imported products, together with any services a customer may require. We work mainly in the automotive, agricultural, mining, general industry and fabrication industries.”

Premium welding brands and relationships

The B.E.D. Group imports and distributes premium quality brands from an impressive list of international and local suppliers, including Hypertherm, Fronius, Reeflex, GYS and Messer Oxyfuel Cutting Systems.

B.E.D.’s Welding & Cutting Division Specialists Michael Calado, Craig Bister and Sean Christian

Extensive personal experience

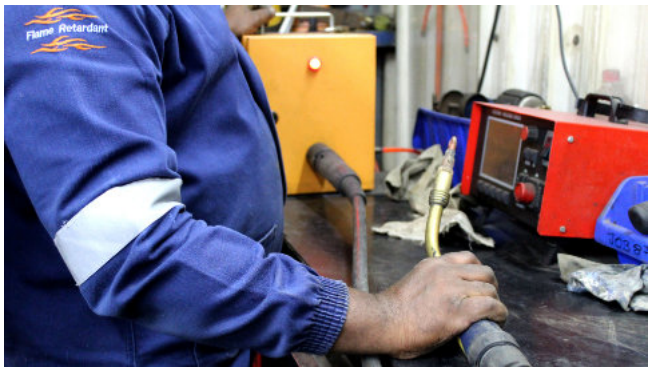
Over and above its relationships with premium quality brands, says Bister, the welding and cutting division is extremely successful because its team members are driven by a passion for welding. In addition to their combined expertise, they are a very tightly-knit, cohesive group.

“We all worked for prominent companies in the welding industry before joining Bolt and Engineering - including significant Pan-African experience. Our offering also includes robotics welding and semi-automation, which is a uniquely specialised area requiring particular skills.”

Demonstrating welding excellence

Bister notes that the experienced team in the B.E.D. Group’s Wadeville welding and cutting division repair centre possesses superior experience in the technical repair and operations of all welding equipment, and the company’s workshops are certified by Fronius International GMbH and Hypertherm South Africa.

Fronius TransPocket 180 in Construction application



Marc Mjwana repairing a welding torch at the B.E.D Group’s Wadeville Welding & Cutting Repair Centre

“We also have four mobile demonstration and assessment vehicles, three of which service Gauteng and the surrounding provinces, with a fourth one based in the Western Cape.” Our technical experts carry out demonstrations at customers’ premises and also assess the current condition of their equipment, providing a detailed welding assessment document for the customer at no charge - and offer technical advice and support on-site,” he explains.

“Having grown the welding and cutting division into the strong unit that it is today, we focus on exceeding customers’ expectations and adding value to their businesses. We look forward to continuing to grow and provide service excellence in the future,” concludes Bister.

TransSteel Pulse

APPLICATION INDUSTRIES

CONTAINER CONSTRUCTION, BRIDGE CONSTRUCTION, YELLOW GOODS

With nearly 170 optimized characteristics, the TransSteel series features the characteristics demanded by the heavy-duty steel construction sector. The TransSteel versions with the Pulse function make child's play of applications involving aluminum and stainless steel. SMEs can benefit from this variety of materials, as just one device is all they need to cover a wide range of applications.

PULSE

/ PULSE WELDING – CONTROLLED AND FAST

The new TransSteel 4000 Pulse and TransSteel 5000 Pulse mark the arrival of the pulsed arc in the TransSteel series. Controlled welding in the intermediate arc range together with optimum weldability when working with aluminum are now part of the basic package.

/ SYNCHROPULSE

The "SynchroPulse" option is recommended for the welding of aluminum alloys when a rippled seam appearance is required.

CATEGORY

Architecturally Exposed Steelwork

STEEL AWARDS 2023

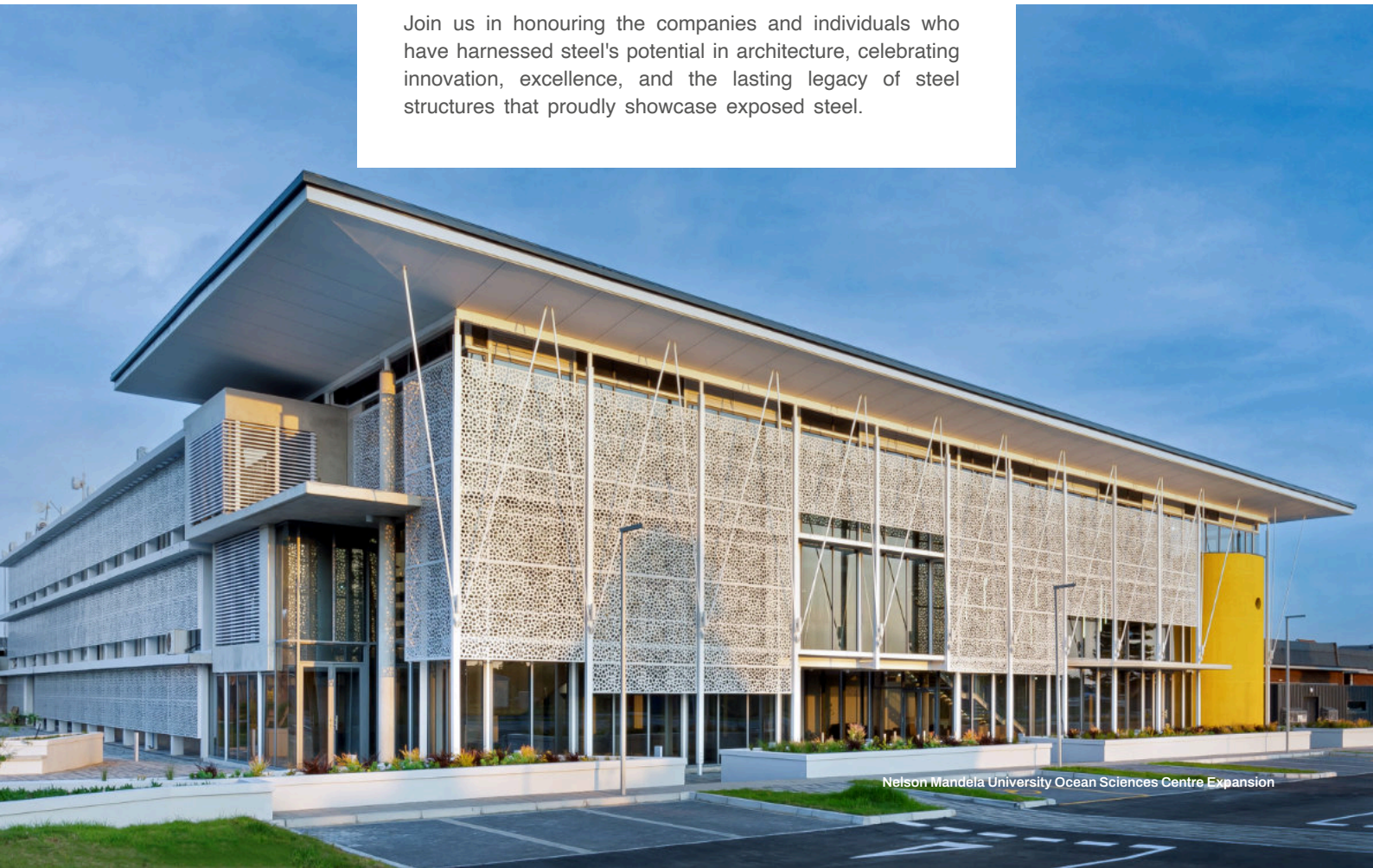
The allure of exposed steel in modern architecture

The Architecturally Exposed Steelwork Category, a showcase at the SAISC Steel Awards 2023, explores the fusion of structural strength and artistic expression in architecture. This segment celebrates the pivotal role that steel plays in shaping iconic architectural projects, pushing the boundaries of design.

Architecturally exposed steelwork becomes an integral part of a building's visual identity, forging a connection between function and form. Steel's inherent strength and malleability empower architects to dream big and achieve the seemingly impossible. From soaring skyscrapers with intricate facades to avant-garde bridges that span breathtaking landscapes, steel's versatility lends itself to pushing the envelope of what architecture can achieve.

The beauty of architecturally exposed steel lies not only in its aesthetics but also in its resilience. These structures withstand the test of time, enduring diverse environmental challenges with grace.

Join us in honouring the companies and individuals who have harnessed steel's potential in architecture, celebrating innovation, excellence, and the lasting legacy of steel structures that proudly showcase exposed steel.



Nelson Mandela University Ocean Sciences Centre Expansion

Winner

Nelson Mandela University Ocean Sciences Centre Expansion

STEEL AWARDS 2023

Making Waves

Nelson Mandela University Ocean Sciences Centre expansion showcases steel's versatility

The Nelson Mandela University Ocean Sciences Centre Expansion project has been making waves in the world of architecture and engineering, earning recognition and accolades for its innovative use of steel. This project claimed two prestigious awards - it was awarded the top prize in the Architecturally Exposed Steelwork category and also the Best Regional Project Eastern Cape at the SAISC Steel Awards 2023.

The Nelson Mandela University Ocean Sciences Centre Expansion, located in Port Elizabeth, South Africa, reflects the remarkable synergy between architectural vision and structural engineering expertise. Spearheaded by renowned architectural firm SVA International, this expansion project was tasked with creating a modern entrance building that not only enhances the campus's aesthetic appeal but also integrates seamlessly with existing structures.

Architectural vision: defining the project

The project's architectural vision was crystal clear - design a structure that serves as an entrance and a vibrant hub for students and researchers to interact, fostering collaboration and innovation. Tony Danev, the lead architect at SVA International, stated, "Our goal was to challenge traditional academic norms and create a space that inspires creativity."

To translate this vision into reality, structural engineer Alex Semple and his team faced the challenge of pushing the boundaries of steel construction. The primary structural system featured a combination of reinforced concrete foundations and bases with substantial spans of reinforced concrete. Semple commented, "We introduced a blend of reinforced concrete with impressive 8 m cantilever spans and 340 mm thick slabs. Steel played a pivotal role as it not only supported the roof but became an integral structural component."

Engineering excellence: precision matters

The project's complexity demanded a sharp focus on precision and attention to detail. Connections between steel and concrete had to be custom-developed to align with the architectural theme. Celeste Venter, representing Uitenhage Super Steel, the project's fabricator, shared, "The interface detailing between concrete and steel was challenging, but it was essential to achieve the architectural outcome. We had to engage closely with all stakeholders to ensure minimal distortion and the perfect fit."

Fabrication, erection, and construction

The manufacturing and erection of the structural steelwork were pivotal phases of the project. Celeste Venter's team at Uitenhage Super Steel handled this challenging task. She noted, "Working in confined spaces with minimal tolerances, we had to ensure that every steel element was fabricated to perfection. It was a true test of our craftsmanship." The construction phase was equally impressive. The integration of an 8 m deep concrete dive tank into the building's facade required meticulous planning and execution. Venter added, "The suspended elements, like the cantilevered slabs and the staircase supported by steel rods, had to be tailor-made. It was a collaborative effort involving metalwork, milling, and machining."

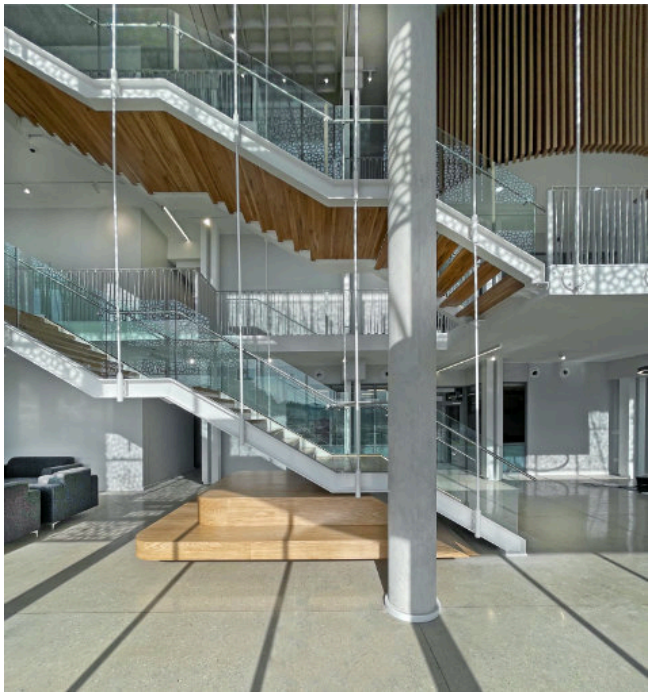
Technical elements: innovation at every turn

One of the project's standout features is the canopy roof, designed to appear as if it is floating. Achieving this effect required ingenious engineering solutions. Alex Semple highlighted, "The roof's engineering was a challenge, but it allowed us to employ slender steel members, innovative connections, and intricate detailing to make the roof appear as if it defied gravity."

The facade of the building presented its own set of challenges. To control solar ingress, a pattern was intricately cut into each ACM panel. The facade also boasts a striking screen that supports greenery, emphasising the project's connection to marine sciences.

“The roof's engineering was a challenge, but it allowed us to employ slender steel members, innovative connections, and intricate detailing to make the roof appear as if it defied gravity.”

Alex Semple, BVi Consulting Engineers



Recognition at SAISC Steel Awards 2023

The Nelson Mandela University Ocean Sciences Centre Expansion has earned well-deserved recognition. This project's innovative use of steel in architectural and structural elements set it apart in the Architecturally Exposed Steelwork category. As the project stands complete, it serves as a testament to the power of collaboration between architects, engineers, and fabricators.

In the words of Tony Danev, the lead architect, "This project has challenged norms and redefined what's possible with steel. It's a symbol of our commitment to creating spaces that inspire and foster creativity."

PROJECT TEAM/DETAILS

Nominator and Architects
SVA International

Client
Nelson Mandela University

Main Contractor
WBHO

Structural Engineer
BVi Consulting Engineers

Steelwork Contractor
Uitenhage Super Steel

Cladding Manufacturer and Supplier
Global Roofing Solutions / Hulabond

Cladding Roll Former / Profiler
Global Roofing Solutions / Likusasa

Cladding / Roofing Contractor
Likusasa / Ceiling Master

Project Completed
September 2022

Steelwork and Cladding Completed
July 2022

Steel Tonnage
Approximately 80 tonnes

Steel Profiles Used
Various

Cladding Profile Used
Klip-Lok 406™ (Concealed Fix) Global

Commendation
Hasso Plattner d-School Afrika

STEEL AWARDS 2023

Innovative steel design:

d-school Afrika at the University of Cape Town

In the heart of the University of Cape Town's Middle Campus stands a testament to modern engineering and architectural innovation – a design school like no other. This pioneering project, recognised at the SAISC Steel Awards 2023, reflects the integration of steel and glass to create an iconic and adaptive space.

Project overview

The Hasso Plattner d-School project at the University of Cape Town was designed to inspire creativity and innovation. Its intricate geometry, precise tolerances, and innovative use of steel make it a noteworthy project. This four storey structure, strategically located at the entrance to Middle Campus, houses the School of Design Thinking. The design thinking philosophy is to encourage innovation and new outcomes within a complex socio-political and economic context.

Structural framing

The backbone of this project is its steel structure, which incorporates various elements, including a complex grid shell roof. The steel framing for the grid shell and eyebrow structure, weighing a combined total of 50 tonnes, was designed to ensure stability while accommodating the structure's intricate geometry.

Engineering challenges

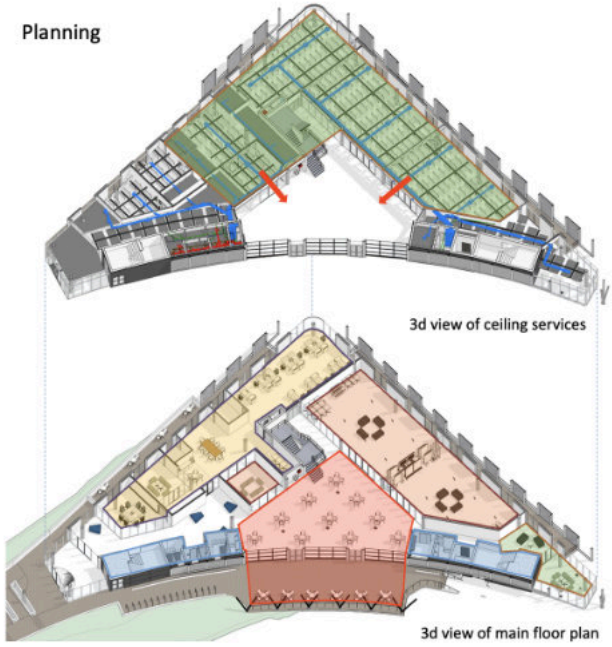
The design and engineering of this project posed several challenges. One of the primary challenges was the unique geometry of the building, with its curved and irregular shape. Calculating the wind loads on this structure required complex analyses due to the varying angles and facades. Engineers had to account for wind coming from multiple directions, a common challenge in such exposed locations.

Fabrication and erection

The steelwork fabrication for this project was divided between two locations, Anchor Steel Projects, based in Cape Town and Novum Structures in Turkey. The detailing and QA/QC checks were rigorous, as precision was paramount. The construction team had to deal with challenging site conditions and a congested site, exacerbated by the constraints posed by the COVID-19 pandemic.

Seamless steel-glass integration

One of the most striking features of this project is the seamless integration of steel and glass. The glass sections were supported by a combination of rotules, bolts, and edge clamps, ensuring they could withstand the required loads while



maintaining transparency. Each piece of glass was carefully positioned to align with the complex steel structure, creating a visually stunning result.

Project achievements

This project's remarkable achievements extend beyond its visual appeal. Its flexible and collaborative spaces have been actively used for various events and functions since its completion, fulfilling its role as a centre for innovation and design thinking. Furthermore, the Hasso Plattner d-School Afrika project received recognition at the SAISC Steel Awards 2023, earning the title of Best Western Cape Project and a commendation in the Architecturally Exposed Steelwork category.

This project serves as an inspiration to engineers, architects, and innovators, demonstrating the limitless potential of steel in modern construction.

PROJECT TEAM/DETAILS

Nominator and Architects
KMH Architects

Client
University of Cape Town

Main Contractor
Haw & Inglis

Structural Engineer
LEAF Structures

Steel Detailer
MNT Draughting Studio and Novum Structures

Steelwork Contractor
Anchor Steel Projects and Novum Structures

Steel Erection / Construction / Installation
Leaf Structures and Anchor Steel Projects

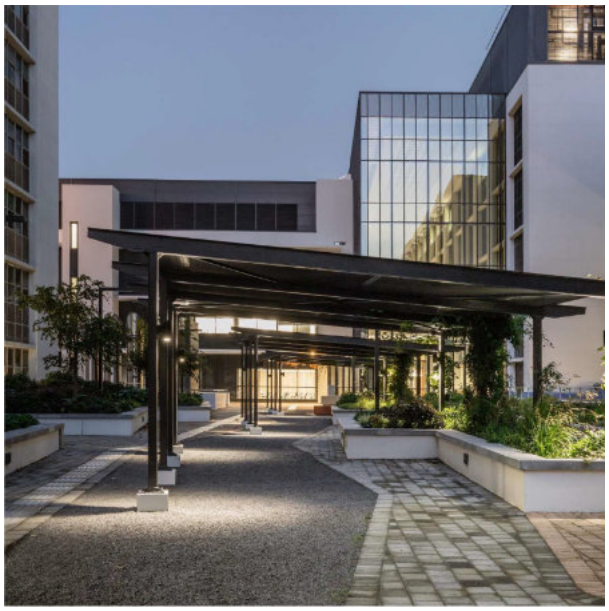
Project Completed
October 2022

Steelwork and Cladding Completed
January 2022

Steel Tonnage
Free form steelwork 29.6 tonnes
Atrium supports, tree columns,
and eyebrow: 20.95 tonnes

Steel Profiles Used
Rectangular, round hollow sections,
and W-frame sections

Commendation
Biomedical Research Institute (BMRI) at Stellenbosch University, Faculty of Medicine



The Biomedical Research Institute (BMRI) at Stellenbosch University, Faculty of Medicine was recently awarded a commendation in the Architecturally Exposed Steelwork category at the SAISC Steel Awards 2023. Spanning five years of meticulous planning and four years of dedicated construction, the final result showcases the innovative use of steel in architecture, engineering and construction.

Building transformation and design philosophy

The BMRI project started with an existing building from the 1970s. The primary objective was to convert this structure into a modern educational space, specifically tailored for physiology and anatomy education. To achieve this, a new building was designed to create a symbiotic connection with the old through a striking glass atrium.

Extensive steel applications

Steel, renowned for its multifaceted utility, played a pivotal role throughout the project's execution. Here's a closer look at some of the key steel applications:

Laundry Rooms and Plant Rooms: Ingeniously designed with steel beams, these spaces provided efficient solutions for complex service requirements. The steel framework allowed for flexibility in accommodating mechanical equipment while ensuring longevity through insulation and roof planning.

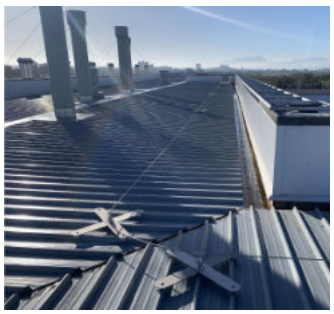
Cladding: The project opted for lightweight insulated cold room panels for cladding, combining modularity and aesthetics. Though cladding posed challenges due to varying on-site conditions, the end result was a clean and crisp aesthetic.

Metal Roof Cladding: Standard steel roofing covered a significant portion of the building, enhancing its overall functionality and structural integrity.

Glass Atrium: The project's crowning achievement, the glass atrium, served as the architectural masterpiece that seamlessly bridged the old and new structures. The intricate steel framework provided crucial support.

Interior Detailing: Steel was integrated into interior design elements, including balustrade enhancements. An existing balustrade received a minimal yet elegant modification, incorporating a steel handrail that not only met compliance standards but was also in keeping with the overall design.

Landscaping Elements: Steel pergolas were strategically placed throughout the building's courtyard and walkways, offering functional shading solutions and enhancing outdoor aesthetics. These structures provided safe spaces for students to sit and study.



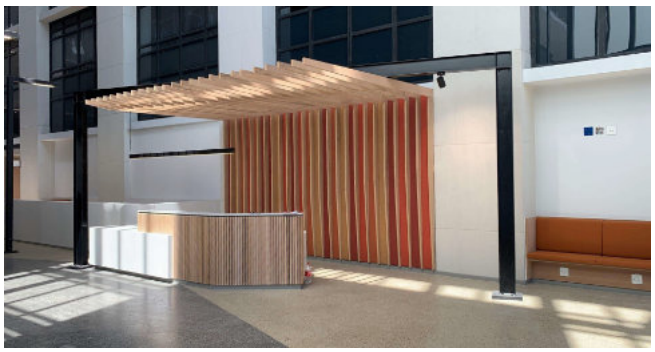
Exterior Design Elements: Steel made its mark in exterior design elements such as tuck shops and canopy bows. Embracing an industrial steel aesthetic, these features added character to the building's facade, contributing to its identity.

Extracts and Supports: Iconic steel supports were designed for external extract structures, clad with stainless steel for both durability and aesthetics. These structures became unmistakable landmarks on the campus, underscoring the innovative and forward-thinking nature of the engineering approach.

Edge Back Cladding: Steel found its place in edge back cladding along the sides of the building. Services were strategically routed outside to bypass existing floor slabs, reducing maintenance requirements.

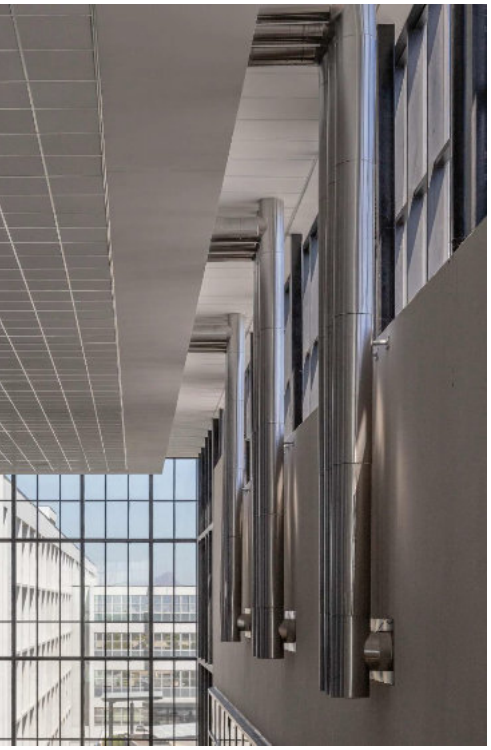
Benefits and achievements

The extensive use of steel in this project offered a number of advantages. Steel's flexibility accelerated construction timelines, supporting efficient progress and the project's commitment to sustainability earned it a prestigious four-star Green Building Council rating, highlighting its environmental responsibility.



Steel's adaptability helped overcome construction challenges within budget constraints. Careful material selection ensured longevity and adaptability for future use, focusing on value for money and exceeding client expectations.

Collaborative efforts of team members including the steel fabricator and structural engineer were key to the project's success. Steel's versatility allowed for complex design elements, enhancing practicality and architectural appeal.



PROJECT TEAM/DETAILS

Nominator and Architect
Roelof Rabe Architects

Client
Stellenbosch University, Faculty of Medicine and Health Sciences

Main Contractor
WBHO

Structural Engineer
Ekcon Consulting Engineers

Steel Detailer
LRJ Steel / Leading Edge

Steel Merchants
Macsteel / ProRoof / Steel and Pipes for Africa

Cladding / Roofing Contractor
Cladco

Project Completed
April 2023

Steelwork Completed
2020 - 2022

Steel Tonnage
196 tonnes

Steel Profiles Used
Various

Cladding Completed
April 2023

Cladding Material Used
Various

Cladding Profiles Used
Saflok 700® (Concealed Fix) - Safintra ProLok 750

ISILO STEEL

SUSTAINABLE DEVELOPMENT THROUGH GROWTH

YOUR TRUSTED PARTNER IN STEEL SOLUTIONS

Isilo Steel, a proudly South African Level 4 B-BBEE company established in 2017, is renowned for its unwavering reliability, commitment to quality, and outstanding service. Our core expertise lies in being a diverse steel supplier, serving clients across various industries with raw and fabricated steel, along with expert Project Management. We thrive on value creation through volume, adapting to different product markets while continually evolving our trading model to stay ahead in the dynamic steel landscape.

INDUSTRIES WE SERVE

Isilo Steel is your partner of choice, providing top-quality steel solutions to a diverse array of key industries, spanning mining, renewable energy and solar projects, power stations, oil & gas, construction, water management, road and rail transport, and engineering. We are dedicated to delivering excellence across a broad spectrum of sectors, ensuring your projects are built on a foundation of strength and reliability.

PRODUCT OFFERING

At Isilo Steel, we take pride in our ever-expanding product range, meticulously tailored to meet the diverse needs of our valued clients across various industries. With a wealth of experience and deep product knowledge, we provide not just steel but technical expertise, guiding you to the ideal solutions for your projects. We're committed to continuous growth and resource enhancement, ensuring that we remain your trusted partner for ongoing requirements.

PRODUCTS WE SUPPLY

Our comprehensive product lineup encompasses a wide array of essential steel components, including chutes, process tanks, conveyor structures, hoppers, towers, grizzlies, trusses, and more. From various grades of hot rolled and cold rolled steel to galvanized products, universal beams, columns, channels, bars, and tubes of different profiles, we've got your needs covered. Additionally, we offer specialised services such as cropping, peeling, and access to stainless steel sheeting. Should your requirements extend beyond our extensive list, Isilo Steel excels in efficient and effective procurement, sourcing both locally and internationally, ensuring your project's success.

BW OWNED BUSINESS

BBBEE LEVEL 4

MEMBER OF:

SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

SAPVIA
South African Photovoltaic Industry Association

CONTACT

Erf 24, Farm Waterval M61, Business Park Block A
Kliprivier, Gauteng, South Africa

Email: info@isilosteel.co.za / Whatsapp: 073 034 2504

Website: www.isilosteel.co.za

Celebrating Regional Excellence:

The Best Regional Steel Construction Projects

The Best Regional Steel Construction projects category, featured at the SAISC Steel Awards 2023, offers a platform to honour the outstanding contributions of steel construction to regional development and progress. This category takes us on a journey to explore the diverse projects that have reshaped communities across South Africa.

Regional development thrives when steel construction becomes the agent of transformation. It is in the regional context that steel's adaptability and strength truly shine. From dynamic urban developments to vital infrastructure projects, these initiatives represent the heartbeat of progress within South Africa's diverse regions.

Steel construction, at its core, is an engine for regional economic growth. The projects recognised in this category generate employment opportunities, stimulate local economies, and enhance the quality of life for residents. They stand as powerful symbols of regional resilience and prosperity.

In addition to economic impact, these projects demonstrate innovation in design and engineering. They reflect the unique challenges and opportunities presented by different regions, from the bustling urban centres to the remote and challenging terrains. The innovative use of steel enables architects and engineers to address these regional nuances while delivering structures that are both functional and visually striking.

Furthermore, the Best Regional Steel Construction Projects Category showcases the spirit of collaboration and partnership. It highlights the efforts of local communities, governments, and industry stakeholders in coming together to realise projects that leave a lasting legacy.

As we celebrate the achievements of the companies and individuals who have pioneered regional steel construction projects, we recognise their role as catalysts for progress and their contribution to the enrichment of South Africa's diverse regions.

Winner Gauteng Region
Pick n Pay Distribution Centre

The Pick n Pay Distribution Centre is a beacon of innovation and sustainability in steel construction, winning the prestigious BSi Steel Factory, Warehouse and Metal Cladding category award (joint winner), the NJR Steel Innovation and Sustainability category award, as well as the Best Regional Project Gauteng category award at the SAISC Steel Awards 2023.

The project's standout feature is the use of steel in creating long-span structures, challenging conventional norms. Progressive techniques like the double portal frame design were employed to ensure structural stability. The project secured a Guinness World Record for roofing sheets spanning up to an astonishing 280 m.

For a complete project overview refer to pages 44 - 46

Winner Mpumalanga Region
Mpumalanga Fresh Produce Market

The Mpumalanga Fresh Produce Market has earned the prestigious SAISC Steel Awards 2023 overall Winner title, the BSi Steel Factory, Warehouse and Metal Cladding category award (joint winner), and the ASTPM Tubular Steel category.

The market is a 29000 m² complex of 17 strategically designed buildings and the structural design, utilised a tubular truss system spanning 70 m. This design minimises internal columns and optimises space. The Mpumalanga Fresh Produce Market serves as a symbol of human ingenuity, setting new benchmarks in the industry.

For a complete project overview refer to pages 21 - 24

Building beyond boundaries: the inspiring story of the Pepkor Warehouse in Hammarsdale

The Hammarsdale Distribution Centre project, recently honoured as the winner for the Best Regional Project in KwaZulu-Natal, has emerged as a symbol of architectural and engineering innovation. The cornerstone of this project lies in its innovative architectural brief. Conceived as a secure and adaptable distribution centre for Pepkor Properties, the brief mandated several key features. Notably, it required minimum clearance heights for racking and internal logistics, a design that could facilitate future solar implementation on the roof, and a secure linkage of facilities. The collaboration between architects, engineers, and the client ensured that these objectives were not only met but exceeded.

Structural framing

At the heart of this project lies the remarkable structural framing. The engineering team harnessed their expertise to construct a purpose-built facility that boasts an astounding 2731 tons of precision-crafted structural steel. This structural framework is a testament to cutting-edge engineering, featuring various steel sections such as HS sections, angles, channels, and more. The project showcased how the choice of steel sections and meticulous detailing could enhance cost-effectiveness without compromising structural integrity.

Steel fabrication

The journey from design to execution was impeccably managed during the fabrication phase. Monica, the detailer, orchestrated the intricate process, ensuring precision in every structural element. Handling such a vast quantity of steel required not only technical skill but also a meticulous eye for quality control.

Construction and erection

The construction and erection phases were nothing short of remarkable. Windy conditions posed a challenge, especially when handling long steel sheets. However, the construction team's commitment to safety and efficiency ensured that the project stayed on course. The project also faced disruptions due to local disturbances, highlighting the resilience of the construction team in navigating such challenges.

Technical achievements

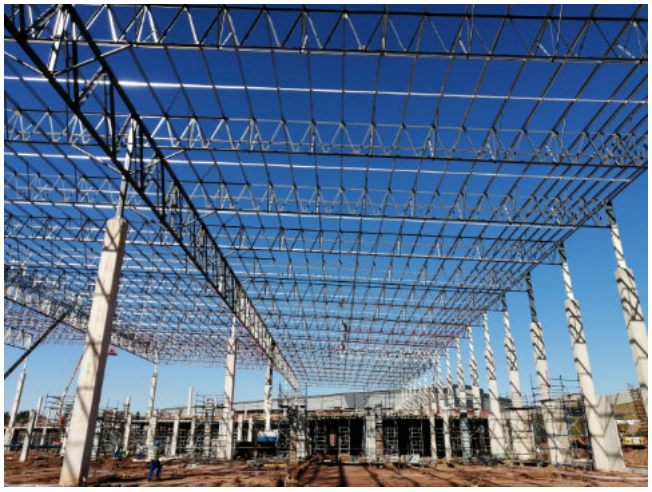
The Hammarsdale Distribution Centre project is a testament to technical ingenuity. The project achieved exceptional outcomes through a combination of innovative approaches and sheer determination. Notable technical achievements include:

Watertight Cladding: The cladding materials used were selected with precision. The roof cladding featured 0.53 mm zinc aluminium sheeting, covering an extensive area of approximately 115 000 m². The side cladding utilised 0.47 mm Colorbond sheeting, with meticulous coverage measurements. Tate & Nicholson, the cladding and roofing contractor, successfully supplied and installed these materials, and their work was commended for its quality and effectiveness in preventing water ingress.

Cost-Effective Design: Throughout the project, emphasis was placed on cost-effectiveness without compromising quality. The project team worked collaboratively to identify areas where cost savings could be achieved while maintaining structural integrity.

Adaptability: The project's architectural and engineering teams collaborated closely to create a secure and adaptable facility. Innovative solutions were implemented to ensure the security of the centre, including underground access tunnels for staff safety and efficient truck movements. The success in achieving safety and security while maintaining accessibility highlights the project's technical achievements.

Speed of Construction: The efficient erection of structural steel elements was a remarkable feat. Despite challenging conditions, including windy weather, the project maintained a steady construction pace. The project's speed of construction underscores the team's commitment to meeting deadlines and delivering results efficiently.



Sustainable Design: The design considerations extended beyond functionality, safety and security. The inclusion of solar implementation on the roof showcased the project's commitment to sustainable design. The new facility is poised to harness solar energy, contributing to environmental sustainability and cost savings.

The Hammarsdale Distribution Centre project is a testament to what can be achieved when architects, skilled engineers, and dedicated construction teams collaborate with a client committed to excellence.

PROJECT TEAM/DETAILS

Nominator and Structural Engineers
EDS Engineering Design Services

Client
Pepkor Properties

Main Contractor
Abbeydale Projects

Architects
TCRPV Architects

Steel Detailer
Mondo Cane

Steelwork Contractor
Cadcon

Steel Erection / Construction / Installation
Fanie Leibrandt Steel Erectors

Steel Merchants
Macsteel, BSi Steel, Allied Steelrode

Cladding Manufacturer
BlueScope

Cladding Roll Former / Profiler / Supplier
Macsteel

Cladding / Roofing Contractor
Tate & Nicholson

Project Completed
March 2023

Steelwork Completed
August 2021

Steel Tonnage
2731 tonnes

Steel Profiles Used
Various

Metal Cladding Completed
December 2022

Cladding Tonnage
800 tonnes

Cladding Profiles Used
Roof - Novotexi 440®
Sides - Widespan 762

Winner Western Cape Region
Hasso Plattner d-School Afrika

The Hasso Plattner d-School project at the University of Cape Town represents a ground-breaking fusion of modern engineering and architectural innovation, earning recognition at the SAISC Steel Awards 2023 with a commendation in the Architecturally Exposed Steelwork category and Winner of the Best Regional Project Western Cape.

This four-story structure, housing the School of Design Thinking, stands as a testament to creativity and innovation. The design and engineering of this project posed several challenges. One of the primary challenges was the unique geometry of the building, with its curved and irregular shape. Beyond aesthetics, the space serves as a hub for innovation.

For a complete project overview refer to pages 73 - 74

Winner Eastern Cape Region
Nelson Mandela University Ocean Sciences Centre

The Nelson Mandela University Ocean Sciences Centre Expansion in Port Elizabeth, South Africa, has garnered international acclaim for its innovative architectural and engineering feats, particularly its pioneering use of steel. This project, led by SVA International, sought to create a modern entrance building that seamlessly integrated with existing structures while fostering collaboration among students and researchers.

Notable features include a floating canopy roof and intricately patterned facade panels, all of which contributed to the project's recognition as winners of the Architecturally Exposed Steelwork category and also the Best Regional Project Eastern Cape category.

For a complete project overview refer to pages 70 - 72

C. Steinweg Group

C. Steinweg Logistics complies with the DTI revised codes of good practice and is a 51% black-owned business. With this, empowerment and employment equity are therefore at the heart of our business.

Our ISO 9001:2015 certification ensures that we perform our work in line with global quality standards.

With C. Steinweg Logistics as a logistics partner, local industries can capitalise on the global network of a Level 1 B-BBEE logistics service provider with the backing of a massive and established parent company of more than 175 years of standing – C. Steinweg Group.

At C. Steinweg Logistics, we understand that moving cargo is not just about getting it from point A to point B. It's about ensuring that the entire process is seamless, secure, and risk-free. With our unparalleled expertise, facilities, and unwavering commitment to excellence, C. Steinweg Logistics has become the trusted partner of businesses throughout South Africa.

With our vast freight forwarding knowledge, we are well-equipped to navigate the complexities of international trade, customs regulations, and logistics of a wide range of commodities. We have established strong relationships allowing us to facilitate the movement of cargo as efficiently and cost-effectively as possible.

Project Nominations

Category Winners, Commendations and Nominations

For project team interviews, case studies and additional project details please visit the projects section of the SAISC website: www.saisc.co.za/projects

Azmet Reactors

The Azmet Reactors, led by Viva Engineering, feature six massive 9.9 m diameter reactors. Precision engineering and advanced modelling enabled impeccable alignment with 3265 precise welds. Transportation challenges due to size were overcome with meticulous planning. This project showcases the steel industry's ability to execute complex projects with precision.

Winner - Mining and Industrial
Winner - Macsteel Pan-African Trailblazer

The Biomedical Research Institute (BMRI) at Stellenbosch University, Faculty of Medicine

The BMRI project creatively harnessed steel and stainless steel, enhancing functionality, sustainability, and aesthetics with a focus on lasting durability. An iconic landmark and unique functional features emerged as a result.

Commendation - Architecturally Exposed Steelwork

Coca-Cola Eswatini

The Conco Warehouse project showcased innovative steel design for Coca-Cola. It's the largest warehouse in Eswatini, featuring unique structures like a coke bottle-shaped gatehouse and waste storage facility. Complex structural elements ensured stability and future expansion capability. Collaboration across borders was crucial for success.

Commendation - BSi Steel Factory, Warehouse and Metal Cladding

Dunlop Retail and Technical Centre

The Dunlop Retail and Technical Centre (Westville) project involved constructing a retail and technical facility using lightweight steel framing. This design optimised space utilisation, incorporated efficient construction methods, and allowed for potential future relocation.

Nominated by Browndeck Roofing & Lightweight Steel

Project Nominations

Category Winners, Commendations and Nominations

STEEL AWARDS 2023

ENK Hydro Project

In the ENK Hydro project, the team successfully delivered a 35 tonne hydro plant, a 30 m steel bridge channel in a remote location, and a precision turbine rotator. They overcame logistical hurdles and security concerns to provide clean electricity to remote areas, making a significant impact for the local community.

Commendation - Macsteel Pan-African Trailblazer

Erf 1 Khyber Rock

The Erf 1 Khyber Rock project featured visionary architecture, emphasising innovative design with over 25 tonnes of steel. Complex geometry was addressed, resulting in a visually striking luxury residence.

Nominated by Edge Engineering

Hasso Plattner d-School Afrika

The Hasso Platner d-School Africa project at the University of Cape Town is an example of intricate geometry, precise tolerances, and seamless steel-glass integration that created an iconic, flexible, collaborative space.

Winner - Best Regional Project Western Cape
Commendation - Architecturally Exposed Steelwork

House Pretorius

House Pretorius is a modern farm-style design, blending A-frame structures with raked ceilings for enhanced volume. While they navigated challenges with sharp apex connections and cladding sheets, the team achieved a beautiful finish with distinctive steel-timber unions, mastering both aesthetic and functional demands.

Nominated by Global Roofing Solutions (GRS)

Project Nominations

Category Winners, Commendations and Nominations

STEEL AWARDS 2023

Indawo @ The Precinct Lifestyle Hub

The Indawo @ The Precinct Lifestyle Hub project highlights the use of steel construction for its strength and aesthetic appeal. Challenges like asymmetric loading and balconies were addressed through careful design and execution. With an emphasis on affordability and high-quality amenities, the project demonstrates the versatility of steel in innovative ways.

Nominated by Tass Engineering

Industrial Bearings Group

The Industrial Bearings Group project showcased innovative steel design, featuring a 7.5 degree angled portal frame, robust steel profiles, and adaptable structures. Steel's strength and adaptability were key, allowing for future expansion and delivering outstanding results.

Nominated by Global Roofing Solutions (GRS)

Irene Link

The structural engineering aspect of the project played a pivotal role in realising the unique design. The steelwork, completed in August 2022, involved a substantial 265 tonnes of structural steel, forming trusses, columns, and beams. The challenge was to seamlessly integrate the curved lines of the architectural facade into the cladding and steel structure.

Commendation - BSi Steel Factory, Warehouse and Metal Cladding

JT Ross Northfields

The JT Ross Northfields project is a prime showcase of steel's prowess, offering structural efficiency and expansive spaces with stability. With intricate angles and strategic louvers, it seamlessly blends engineering with architectural finesse.

Commendation - BSi Steel Factory, Warehouse and Metal Cladding

Project Nominations

Category Winners, Commendations and Nominations

Lumwana CV3 Stockpile Conveyor

In Zambia's CV3 Stockpile Conveyor Project, structural issues in a main feed conveyor were addressed. Concrete columns and a new steel truss resolved foundation challenges. 3D scanning ensured precision, and steel enabled quick setup. The result was a stabilised conveyor ensuring continuous production.

Commendation - Macsteel Pan-African Trailblazer

Lokumete Palm Oil Processing Plant

The Lokumete Palm Oil Processing Plant in the Democratic Republic of Congo replaced an old facility, emphasising self-sufficiency with biomass energy. It overcame remote challenges, integrated global equipment, and became an engineering masterpiece in just 24 months.

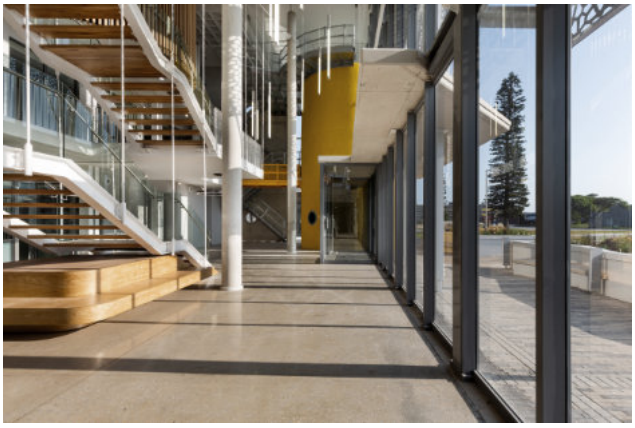
Nominated by JTC Building Systems

Mpumalanga Fresh Produce Market

The Mpumalanga Fresh Produce Market's Building 10 showcases a blend of architectural genius and engineering innovation. Emphasising flexibility and a suitable microclimate, its unique tubular truss design stands out.

Overall Winner

Joint Winner - BSi Steel Factory, Warehouse and Metal Cladding
Winner - ASTPM Tubular Steel
Winner - Best Regional Project Mpumalanga



Nelson Mandela University Ocean Sciences Centre Expansion

The Nelson Mandela University Ocean Sciences Centre Expansion project showcases steel's architectural versatility. With bold cantilevers, a suspended staircase, and innovative connections, it stands as a testament to the limitless potential of steel in construction.

Winner - Architecturally Exposed Steelwork
Winner - Best Regional Project Eastern Cape

Project Nominations

Category Winners, Commendations and Nominations

STEEL AWARDS 2023

Northam Zondereinde 3 Shaft

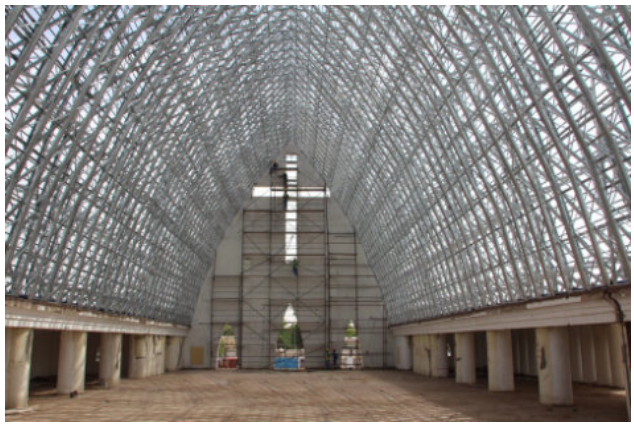
The Northam Zondereinde Shaft 3 project involved designing, fabricating, and installing a state-of-the-art headgear complex for Northern Platinum. The project showcases innovative modular design and precision steelwork.

Commendation - Mining and Industrial
Commendation - NJR Steel Innovation and Sustainability

Our Lady of Peace Cathedral

The Our Lady of Peace project undertook the transformation of a cathedral that was originally destroyed by fire in 1989. Transitioning from timber to steel, the rebuild utilised around 120 tonnes of light steel frame ultra span profiled sections.

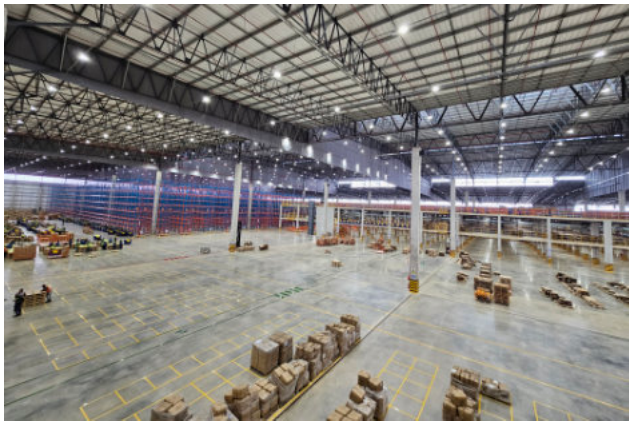
Winner - Stewarts & Lloyds Light Steel Frame Buildings



Pepkor Distribution Centre, Hammarsdale

The Pepkor Hammarsdale Distribution Center project is a testament to cutting-edge engineering. It boasts 2731 tons of precision-crafted structural steel. The design incorporates wind-resistant features. Innovative cladding solutions further enhance its excellence, pushing construction boundaries.

Winner - Best Regional Project KwaZulu-Natal



Pick n Pay Distribution Centre

The Pick n Pay Distribution Centre project achieved a Guinness World Record with roofing sheets spanning an impressive 280 m. This underscores the project's innovative use of roofing and cladding, showcasing cutting-edge sheeting installation methods.

Joint Winner - BSi Steel Factory, Warehouse and Metal Cladding
Winner - NJR Steel Innovation and Sustainability
Winner - Best Regional Project Gauteng

Qurtuba Amphitheatre Umbrella Structures

The QIA Amphitheatre Umbrella project showcases six distinct steel umbrellas as a modern substitute for old planter box shading. Weighing in at 7.5 tonnes, the choice of steel emphasises lightness, aesthetics, and durability.

Nominated by Aspire Consulting Engineers

Redstone CSP Project

The Redstone CSP Project in South Africa's Northern Cape built a 150 m tower and a 188 m staircase, using solar power to generate electricity. Despite tight timelines and complex logistics, it successfully supports renewable energy goals.

Nominated by Viva Engineering

Sappi Ngodwana Lime Silo

In the Sappi Ngodwana Lime Silo project, the team accomplished a remarkable feat with a fully welded steel structure. This design ensured efficient mass flow for consistent material discharge. Steel's strength and off-site fabrication were pivotal for success.

Nominated by Viva Engineering

Scaw Stack

The Scaw Stack project in South Africa features an impressive 78 m steel stack with innovative helical spirals, meeting strict safety standards. It showcases precision welding, and minimises on-site welding with modularisation.

Commendation - Mining and Industrial

Project Nominations

Category Winners, Commendations and Nominations

Shoprite Distribution Centre, Canelands

The Shoprite Distribution Centre Canelands expansion in KwaZulu-Natal features an 80 m three-hinged arch system, anchored on deep pile foundations. Using S355 steel and moment-resisting connections, the design addresses the region's expansive clay and coastal wind loads.

Nominated by WSP Group Africa / Avellini Bros

St John's Aquatic Centre Roof

The St John's Aquatic Center transformation highlights a 48 m roof structure. Tubular steel was chosen for its resilience and aesthetic appeal. Faced with limited site space, pre-fabrication and modular assembly were prioritised, and telescopic mobile cranes were utilised for the precise and efficient erection of the structure.

Commendation - ASTPM Tubular Steel

The Brickworks by Investec Supergroup Warehouse

The Brickworks Supergroup Project features a steel-framed warehouse with cantilever concrete columns, showcasing steel's structural excellence. Efficient in-house fabrication and collaboration led to success in industrial construction.

Nominated by Cousins Steel International

Zambezi Drive LED Digital Billboard

The Zambesi Drive Digital Billboard spans 47 m with intricate design specifications. It features a thin steel arch supporting a box structure. Precision in fabrication and assembly combines aesthetics with functionality.

Nominated by Stewarts & Lloyds

Meet Our Team

Passionate Professionals Driving Excellence in the Steel Industry

At the Southern African Institute of Steel Construction (SAISC), our dedicated team works tirelessly to promote and advance the steel industry. With a wealth of qualifications and professional experience, the SAISC management team, supporting staff, and board members deliver exceptional value to our members.

Amanuel Gebremeskel
CEO, SAISC

Our team embodies SAISC's commitment to excellence, innovation, and collaboration within the steel industry. Get to know the passionate individuals driving excellence and making a positive impact. We are here to serve, support, and drive positive change.

Dennis White
DIRECTOR, SAMCRA

Nicolette Skjoldhammer
CHAIRPERSON, SAISC BOARD

Denise Sherman
MARKETING AND MANAGEMENT CONSULTANT

Debbie Allcock
PROJECT ADMINISTRATION ASSISTANT

Reubenett Andrews
MEMBERSHIP AND SERVICES MANAGER

Elrika Boschoff
BUSINESS ACCOUNTANT AND BOOK SALES

Become a Member

By becoming a member of the SAISC, you join a community of industry professionals, gain access to valuable resources, and enjoy a range of benefits that contribute to your professional growth, recognition, and success in the steel construction industry. While our members come from different disciplines, company sizes and streams within the industry, they all have the desire to see the industry grow and thrive.

Benefits for company membership

- Mark of Quality and Professionalism
- Access member-only content
- Receive technical advice
- Up to date with code and specification changes
- Receive contractual and business advice
- Finding support when you feel you are standing alone
- Networking with clients, the professions as well as competitors
- Discuss industry issues and let your view be heard
- Attending courses aimed at steel construction
- Receive discounts on all SAISC publications
- Receive discounts on attendance fees for courses, seminars and conferences
- Acknowledgement of the member company's involvement in projects profiled on the SAISC Website
- Benefits enjoyed by Individual Members are applicable to a limited number of individuals employed at a member company, based on the membership category and fee
- Permission to use the SAISC logo on the company website or email signatures
- Marketing and PR support services
- Company listing on the SAISC Member Directory / Website
- Opportunity to participate in sponsorship of the annual SAISC Steel Awards.

Benefits for individual membership

- Access member-only content
- Receive technical advice
- Up to date with code and specification changes
- Finding support when you feel you are standing alone
- Networking with clients, the professions and competitors
- Discuss industry issues and let your view be heard
- Attending courses aimed at steel construction
- Receive discounts on all SAISC publications = 1 per publication per year
- Receive discounts on attendance fees for courses, seminars and conferences

Membership for individuals are not transferable and may only be used by individual holding the membership. Individuals are also not allowed to use our LOGO.

How the SAISC is funded

The Southern African Institute of Steel Construction (SAISC) is a non-profit organisation that relies on various sources of funding to support its activities and initiatives. Primary sources of funding include contributions by steel producers, membership fees, workshop and course enrolment fees and book sales. It is through this combined support that the SAISC sustains its operations and fulfils its objectives of market development, education, technology advancement, and member services within the steel construction industry. If you would like to become a member please complete our Become a Member form online.

Understanding the Southern African Institute of Steel Construction

The Southern African Institute of Steel Construction (SAISC) is the sole technical and advisory organisation in Africa, serving the steel Industry since 1956 and dedicated to promoting and supporting the use of steel in the construction industry. With its comprehensive expertise and industry knowledge, the SAISC plays a vital role in advancing the understanding, application, and best practices related to steel construction across the region.

Our Mission

The SAISC has a clear and focused mission, which is to develop, promote, and sustain the health and wealth of the steel construction industry in Southern Africa. This mission statement serves as a guiding principle for all the activities and initiatives undertaken by the SAISC.

Our Membership

The SAISC boasts a membership roster of 459 members, representing a wide range of disciplines within the South African steel and steel construction industry. These members encompass various sectors and roles, spanning from design and production to construction.

There are five categories of membership:

1. **Steel Producer/Mill Membership** for companies that are members of the SA Iron and Steel Institute.
2. **Steelwork Contractor Membership** for fabricators and erectors of structural steel.
3. **Associate Corporate Membership** for companies and organisations with an interest in structural steel such as converters/manufacturers of steel products, steel merchants and services centres, consulting engineers, detailers, project managers, and suppliers of goods and services to the industry.
4. **Professional Individual Membership** which is for structural engineers, architects, quantity surveyors and project managers who are proficient in structural steel design or construction.
5. **Associate Individual Membership** for any person not qualifying for Professional Membership.

Our Objectives

The SAISC is driven by a set of clear objectives that guide its activities and initiatives. These objectives are designed to support the growth, development, and competitiveness of the steel and steel construction industry, both domestically and internationally.

The key objectives of the SAISC are as follows:

To improve market share and turnover:

The SAISC aims to enhance the market share and financial performance of the steel and steel construction industry. This is achieved through strategic promotion and advocacy efforts which highlight the benefits, advantages, and applications of steel in various markets. By increasing awareness and demand for steel construction, the SAISC contributes to the growth and success of industry stakeholders.

To maintain and develop a favourable business environment:

The SAISC is committed to creating a conducive business environment for the steel and steel construction industry. This includes advocating for supportive policies, regulations, and standards which facilitate the smooth operation and growth of businesses within the industry. By working closely with government bodies, regulatory agencies, and industry associations, the SAISC ensures that the interests of its members are represented and protected.

A focus on increased capability, improved productivity, and competitiveness:

The SAISC recognises the importance of continuous improvement and competitiveness in the steel and steel construction industry. To achieve this, the SAISC promotes the development of enhanced capabilities, improved products, and increased productivity within the industry. By investing in research and development, fostering innovation, and providing training and education opportunities, the SAISC helps its members gain a competitive advantage in local and international markets.

To utilise cutting-edge technology in design and construction:

The SAISC harnesses the combined resources of the institute and the industry to promote and develop cutting-edge technology in the design and construction of steel structures. By staying at the forefront of technological advancements, the SAISC enables its members to deliver innovative and sustainable solutions. This includes embracing digitalisation, automation, and advanced engineering practices to optimise efficiency and quality in steel construction projects.

In closing, the SAISC's objectives revolve around market growth, a favourable and positive business environment, enhanced capabilities, and the utilisation of cutting-edge technology. By pursuing these objectives, the SAISC contributes to the long-term success and competitiveness of the steel and steel construction industry in South Africa and beyond.

SAISC MEMBERS

STEEL MILL/MANUFACTURER

UNICA Iron & Steel (Pty) Ltd
Ravin Singh
Tel: +27 12 719 9736
ravin@unica.co.za
www.unica.co.za

STEEL MERCHANTS & SERVICE CENTRES

Gauteng

Allied Steelrode (Pty) Ltd
Justin Dax Cloete
Tel: +27 10 216 0189
justinc@alliedsteelrode.co.za
www.alliedsteelrode.com

BSI Steel (Pty) Ltd
Keith Whiting
Tel: +27 11 861 7603
keith.whiting@bsisteel.com

Macsteel Service Centres SA (Pty) Ltd
Franco Mordini
Tel: +27 11 871 4677
franco.mordini@macsteel.co.za
www.macsteel.co.za

NJR Steel Services (Pty) Ltd
Nick Chapman
Tel: +27 11 477 5515
nchapman@njrsteel.co.za
www.njrsteel.co.za

Stewarts & Lloyds Holdings (Pty) Ltd
Mandy de Oliveira
Tel: +27 11 553 8500
mandyd@sltrading.co.za
www.stewartsandlloyds.co.za

TW Profile Services (Pty) Ltd
Leon Coetzee
Tel: +27 11 894 3031
leonc@twprofile.co.za
www.twprofile.co.za

ISILO Steel
Michael Perimal
Tel: +27 11 861 7612
michael.perimal@isilosteel.co.za
www.isilosteel.co.za

STEELWORK CONTRACTORS

Gauteng

African Steel & Associated Projects (Pty) Ltd
Colin Wilson
Tel: +27 72 647 1829
accounts@asap.za.net
www.agristructures.co.zw

Anchor Enginuity
Andrew Kirkland
Tel: +27 72 386 7969
andrew@anchoreng.co.za
www.anchoreng.co.za

Betterect (Pty) Ltd
Nicolette Skjoldhammer
Tel: +27 11 872 2525
nicolette@betterect.co.za
www.betterect.co.za

Cadcon (Pty) Ltd
Richard Butler
Tel: +27 12 664 6140
richbutler@cadcon.co.za
www.cadcon.co.za

Ferro Eleganza (Pty) Ltd
Chris Narbonese
Tel: +27 12 803 8035
admin@ferroe.co.za
www.ferroe.co.za

Louwill Engineering (Pty) Ltd
Juan Sliep
Tel: +27 11 818 5186
juan@louwill.co.za
www.louwill.co.za

Magnet Engineering (Pty) Ltd
Diniz Belo
Tel: +27 11 908 3500
magnetgr@global.co.za
www.magnetengineering.co.za

Nhlanganiso Nobuhle Enterprise
Xolani Masango
Tel: +27 79 234 2042
nhlangabuhle@gmail.com

NJW Engineering Services CC
Nick Van Deventer
Tel: +27 12 541 3931
nick@njw.co.za

RSB Contracts (Pty) Ltd
Richard Spencer
Tel: +27 87 711 0657
rspencer@rsbcontracts.com
www.rsbcontracts.com

Steel Band Construction CC
Steven Smit
Tel: +27 82 610 0426
steelband@icon.co.za
www.steelbandconstruction.co.za

Tass Engineering (Pty) Ltd
Tim Tasioulas
Tel: +27 11 975 0647
tim@tasseng.co.za
www.tass.co.za

Viva Engineering (Pty) Ltd
Collen Gibbs
Tel: +27 11 392 3926
colleng@vivaeng.co.za
www.vivaeng.co.za

KwaZulu-Natal

Avellini Bros (Pty) Ltd
Pietro Avellini
Tel: +27 31 464 0421
pietro@avellini.co.za

Cousins Steel International (Pty) Ltd
Adam Oldfield
Tel: +27 31 309 4444
adam@cousinssteel.co.za
www.cousinssteel.co.za

Ogilvie Engineering (Pty) Ltd
Allan Olive
Tel: +27 31 736 1643
allan@ogilvieengineering.co.za

SpanAfrica Steel Structures (Pty) Ltd
Max Heinzelmann
Tel: 087 500 7500
maxh@spanafrica.co.za
www.spanafrica.co.za

Steelkon Projects
Konrad Karcz
Tel: +27 82 971 5916
konrad@steelkon.co.za
www.steelkon.co.za

Mpumalanga

B&T Steel
Bryan Wilken
Tel: +27 13 665 1914
marketing@btsteel.co.za
www.btsteel.co.za

Steel Services and Allied Industries
Lawrence Bartlett
Tel: +27 18 788 6652/3
lawrenceb@steelservices.co.za
www.steelservices.co.za

Eastern Cape

Uitenhage Super Steel CC
Ginkel Venter
Tel: +27 41 922 8060
ginkel@uss.co.za

Western Cape

Prokon Services (Pty) Ltd
Martin Lotz
Tel: +27 21 905 4448
martin@prokonservices.co.za
www.prokonservices.co.za

Union Steel (South Africa) (Pty) Ltd
Michael Papanicolaou
Tel: +27 21 534 2251
michael@unionsteel.co.za
www.unionsteel.co.za

Eswatini (Swaziland)

IFA Engineering (Pty) Ltd
Joanne Paiva
Tel: +27 21 534 2251
paivaj.ifa@swazi.net

CONSULTING ENGINEERS, & PROJECT MANAGERS

Gauteng

AECOM SA (Pty) Ltd
Stuart Manzie
Tel: +27 12 421 3832
stuart.manzie@aecom.com
www.aecom.co.za

Aspire Consulting Engineers
Zeenat Kariim
Tel: +27 11 486 1082
zeenat@aspireconsulting.joburg
www.aspirenet.com

Zutari (Pty) Ltd
OJ Ajayi
Tel: +27 12 427 2025
OJ.Ajayi@zutari.com
www.zutari.com

Bigen Africa Services (Pty) Ltd
Daneel Strydom
Tel: +27 12 842 8840
daneel.strydom@bigenafrica.com
www.bigenafrica.com

Consultaurie Design (Pty) Ltd
Mark Phillips
Tel: +27 11 234 6787
mark@ctauri.com

DRA Projects (Pty) Ltd
Ryan Males
Tel: +27 11 086-2325
ryan.males@draglobal.com
www.draglobal.com

EDS Engineering Design Services (Pty) Ltd
Hergen Fekken
Tel: +27 12 991 1205
hergen@edseng.co.za
www.edseng.co.za

Edge Engineering (Pty) Ltd
Jason Bluff
Tel: +27 87 822 1712
jason@edgeengineering.co.za
www.edgeengineering.co.za

Execudraw Drafting Services (Pty) Ltd
Johan Benade
Tel: +27 11 954 0471
benade@execudraw.co.za
www.execudraw.co.za

Hatch Africa (Pty) Ltd
Morne Fourie
Tel: +27 11 239 5422
morne.fourie@hatch.com
www.hatch.com

Industrial Painting Services (Pty) Ltd
Sean Bemelman
Tel: +27 11 421 0314
info@onsitepainting.co.za
www.onsitepainting.co.za

JA Rutkiewicz Consulting Structural and Civil Engineer
Jarryd Norton
Tel: +27 11 880 5770
jarryd@jrce.co.za
www.jrce.co.za

Mondo Cane CC
Rob Chalmers
Tel: +27 21 852 2447
rob@mondocane.co.za
www.mondocane.co.za

Merlicon (Pty) Ltd
Johan de Boer
Tel: +27 21 905 7165
johan@merlinps.co.za
www.merlicon.co.za

MPA Consulting (Pty) Ltd
Malani Padayachee-Saman
Tel: +27 11 781 9710
admin@mpaconsulting.co.za
www.mpaconsulting.co.za

NAKO LBE
Nolan Pillay
Tel: +27 12 665 3102
nolan.pillay@nakogroup.com
www.nakogroup.com

NJV Consulting Engineers and Project Managers
Linda Ness
Tel: +27 12 541 3931
nick@njw.co.za

Nyeleti Consulting (Pty) Ltd
Pren Moodley
Tel: +27 12 361 3629
structures@nyeleti.co.za
www.nyeleti.co.za

Nuwater Systems (Pty) Ltd
James Morisse
Tel: +27 12 788 3125
james@nuwater.com
www.nuwater.com

Rubicon Draughting (Pty) Ltd
Bennie Swanepoel
Tel: +27 76 288 3835
rubicondraughting.co.za

Roytec Global (Pty) Ltd
Roald Sogno
Tel: +27 11 608 0000
Roald.Sogno@roytec.co.za
www.roytec.co.za

Tenova TAKRAF Africa
Bhavesh Bhaga
Tel: +27 11 201 2377
bhavesh.bhaga@tenova.com
www.takraf.com

WSP Group Africa (Pty) Ltd
Johan Piekaar
Tel: +27 11 300 6000
johan.piekaar@wspgroup.co.za
www.wspgroup.co.za

QuicksilvaSteel (Pty) Ltd
Joao da Silva
Tel: +27 10 025 2525
joao@quicksilvagroup.com
www.quicksilva.com

KwaZulu-Natal

DMV Richardsbaai (Pty) Ltd
Le Roux Fourie
Tel: +27 35 789 1828
admin@dmvrb.co.za

Gavin R Brown & Associates
Gavin R Brown
Tel: +27 31 202 5703
info@global.co.za
www.gavbrown.co.za

Inqubeko Consulting Engineers
Freek Pretorius
Tel: +27 35 772 1592
freek@inqubeko.co.za
www.inqubeko.co.za

Young & Satharia (Pty) Ltd
Abdool Satharia
Tel: +27 31 207 7252
abdool@yands.co.za
www.yands.co.za

Mpumalanga

Bulkcon CC
Desmond Enslin
Tel: +27 17 811 7520
desmond@bulkcon.co.za
www.bulkcon.co.za

Ijubane Projects (Pty) Ltd
Willie Greyling
Tel: +27 13 243 4390
willie@glps.co.za
www.glps.co.za

J.A.M.S. Geological Services CC
Pieter Vermeulen
Tel: +27 17 632 2990
pieter.vermeulen130969@gmail.com

North West

Kantey & Templer (Pty) Ltd
Bradley lee-Jones
Tel: +27 21 405 9600
bradleyl@ct.kanteys.co.za
www.kanteys.co.za

SMEC South Africa (Pty) Ltd
John Anderson
Tel: +27 21 417 2900
john.anderson@smec.com
www.smec.com

STEEL PRODUCT MANUFACTURERS

Abeco Tanks (Pty) Ltd
Duane Ramos
Tel: +27 11 493 1197
duane@abeco.co.za
www.abecotanks.co.za

Augusta Steel (Pty) Ltd
Nico Erasmus
Tel: +27 11 914 4628
nico@augustasteel.co.za
www.augustasteel.co.za

COLVIC Marketing & Engineering (Pty) Ltd
Vic Hall
Tel: +27 11 457 8500
vich@colvic.co.za
www.colvic.co.za

CBC Fasteners (Pty) Ltd
Rob Pietersma
Tel: +27 11 767 0130
rob@cbc.co.za

Mentis Africa
Ruben Roach
Tel: +27 11 255 3200
ruben.roach@mentis.com
www.mentis.com

Silele Construction and Projects (Pty) Ltd
Thato Lethunya
Tel: +27 14 008 5250
molefi@sileleconstruction.co.za

Swasap (Pty) Ltd
Derek Anderson
Tel: +27 11 873 6666
derek@swasap.com
www.swasap.co.za

Urethane Moulded Products (Pty) Ltd
Trevor Carolin
Tel: +27 11 452 1000
trevor@ump.co.za
www.ump.co.za

Vital Engineering & Angus Mcleod (Pty) Ltd
Glen Pringle
Tel: +27 11 898 8500
glen@gratings.co.za
www.gratings.co.za

CIVIL ENGINEERING CONTRACTORS

MACHINE MANUFACTURERS

FICEP SPA
Nick Blackwell
Tel: +39 033 287 6111
marketing@ficep.it
www.ficepgroup.com

Lindapter International
Louise Foster
Tel: +44 (0) 1274 52144
lfoster@lindapter.com
www.lindapter.com

SUPPLIERS OF GOODS AND SERVICES

ARMCO Superlite (Pty) Ltd
Anthonie de Wit
Tel: +27 11 974 8511
dewit.anthonie@armco.co.za
www.armco.co.za

BED Holdings (Pty) Ltd
Mike Giltrow
Tel: +27 11 824 7500
mike@bolteng.co.za
www.botleng.co.za

BSE Distributors CC
Elliot Marcinko
Tel: +27 11 609 4987
elliot@bsedistributors.co.za

Cadex Systems SA (Pty) Ltd
John Swallow
Tel: +27 11 767 1857
johnswallow@cadexsa.com
www.cadexsa.com

Impala Bolt & Nut (Pty) Ltd
Justin Dekker
Tel: +27 11 824 3925
jdekker@impalasa.co.za
www.impalabolt.co.za

EMERGING / DEVELOPING

Four Tops Engineering Service CC
Essau Motloung
Tel: +27 14 558 2031
essau@fourtops.co.za

ASSOCIATION

Corrosion Institute of Southern Africa
Greg Combrink
Tel: +27 10 224 0761
president@corrisa.org.za
www.corrisa.org.za

HDGASA
Robin Clarke
Tel: +27 11 456 7960
robin@hdgasa.org.za
www.hdgasa.org.za

LSFB MANUFACTURERS
LARGE: Capacity >= 1000 tons

Dezzo Roofing (Pty) Ltd
Brandon Harding
Tel: 087 057 8550
brandon@dezzoroofing.co.za
www.dezzoroofing.co.za

MiTek Industries South Africa (Pty) Ltd
Uwe Schluter
Tel: +27 11 237 8700
marketing@mitek.co.za
www.mitek.co.za

Siteform Roofing and Framing
Johan Fourie
Tel: +27 51 451 2166
info@siteform.co.za
www.siteform.co.za

Trumod (Pty) Ltd
Gavin Jacobsen
Tel: +27 11 363 1960
gavin@trumod.co.za
www.trumod.co.za

Zambezi Roofing & Steel
David Gale
Tel: +260 211 287684 / +27 76 301 5096
david.gale@zambezi-roofing.com
www.zambezi-roofing.com

DESIGN CONSULTANTS

By Design Consulting Engineers
Barend Oosthuizen
Tel: +27 21 883 3280
barend@bydesign.org.za

C-Plan Structural Engineers (Pty) Ltd
Cassie Grobler
Tel: +27 11 472 4476
cassie@cplanstruc.co.za
www.cplan.co.za

Hull Consulting Engineers CC
Mike Hull
Tel: +27 11 468 3447
hull@iafrica.com

BUILDING INDUSTRY

LARGE

Futurecon
Gerrit Burger
Tel: +27 82 826 0948
gerrit@futurecon.co.za

SMALL

The Gap Infrastructure Corporation (Pty) Ltd
Roelof van den Berg
Tel: +27 12 881 0210
roelof@barzanigroup.co.za
www.barzanigroup.co.za

Container Consumables & Industrial Supplies
Leslie Sivasunker
Tel: +27 32 533 2266
lez@containerconsumables.co.za

SMC Africa
Andrew Dewar
Tel: +27 82 491 2717
andrew@smcafrica.com
www.smcafrica.com

6 Bar Construction
Gary Vandayar
Tel: +27 83 267 1888
Gary@VandayarHoldings.co.za
www.6barconstruction.co.za

Zidlaphi Kgomo and Associates
Tichaziva Chiwota
Tel: +27 11 609 1471/3
ticha@zidlaphi.co.za

SAMCRA
SOUTH AFRICAN METAL CLADDING AND ROOFING ASSOCIATION

SAMCRA MEMBERS

PRODUCER MILL

SAFAL Steel (Pty) Ltd
Simon Manelli
Tel: +27 31 782 5500
simon.manelli@safalgroup.com
www.safalsteel.com

PROFILER / MANUFACTURER

Global Roofing Solutions (Pty) Ltd
Johan van der Westhuizen
Tel: +27 11 898 2902
marketing@globalroofs.co.za
www.global-roofing-solutions.co.za

Macsteel Roofing
Dave Reid
Tel: +27 11 871 4902
dave.reid@macsteel.co.za

Safintra South Africa (Pty) Ltd
Justin Jackson
Tel: +27 31 031 492 5387
justin.jackson@safalgroup.com

BUILDING CONTRACTORS

Indawo Cape (Pty) Ltd
Geoffrey Jack
Tel: +27 21 946 3366
info@indawo.biz
www.indawo.biz

Luvthis Trading and Investments (Pty) Ltd
Geoffrey Jack
Tel: +27 21 946 3366
info@indawo.biz
www.indawo.biz

NATIONAL ROOFING CONTRACTORS

Tate & Nicholson
Martin Bakker
Tel: +27 11 464 0910
mbakker@tn.co.za
www.southey.co.za

Zidlaphi Kgomo and Associates
Tichaziva Chiwota
Tel: +27 11 609 1471/3
ticha@zidlaphi.co.za

Safintra South Africa (Pty) Ltd
Justin Jackson
Tel: +27 31 031 492 5387
Justin.jackson@safalgroup.com

PROVINCIAL ROOFING CONTRACTORS

Safintra South Africa (Pty) Ltd
Justin Jackson
Tel: +27 31 031 492 5387
Justin.jackson@safalgroup.com

ALLIED PRODUCTS

Kare Industrial Suppliers (Pty) Ltd
Reitze Hylkema
Tel: +27 11 334 0922
reitze@kare.co.za
www.kare.co.za

Rigifoam
Duncan Goldsmith
+27 11 421 0313
duncan@rigifoam.com
www.rigifoam.com

Steel Awards 2023
Sponsors

THE LINK
STEEL AWARDS 2023

Strength & Beyond
UNICA IRON & STEEL

Main Event Sponsor

MACSTEEL®
Pursuing Reinvention

Pan-African Trailblazer
Category Sponsor

BSi STEEL
Forging Partnerships

Factory, Warehouse and Metal
Cladding Category Sponsor

STEWARTS & LLOYDS

Light Steel Frame Buildings
Category Sponsor

njr steel
first for steel

Innovation and Sustainability
Category Sponsor

ASTPM

Tubular Steel
Category Sponsor

B & E D
Est. 1983

Table Decor Sponsor

ISILO STEEL

Photo Booth Sponsor

C. Steinweg Group

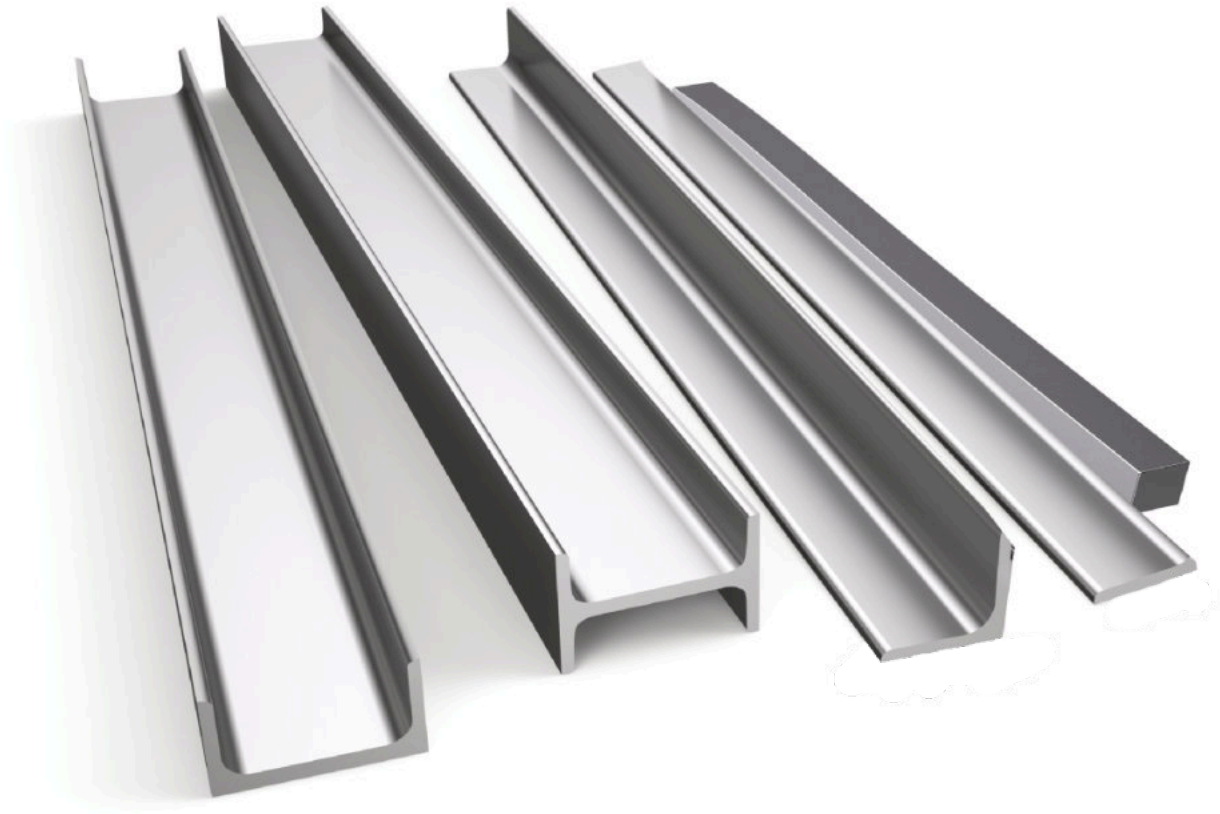
Beverage Sponsor

steel

Feature or advertise in the next issue of *THE LINK*

For members of the Southern African Institute of Steel Construction who would like to be featured in the next issue of *THE LINK*, or for advertising opportunities please contact us.

Call us on +27 11 726 6111 or email us at info@saisc.co.za or visit www.saisc.co.za



Proudly pioneering secondary steel manufacturing in South Africa.

Unica Iron and Steel is a first of it's kind, fully integrated mini steel plant, manufacturing light and medium structural steel from iron scrap. Established in Babelegi 2006, the company has garnered a reputation for manufacturing quality light structural sections (window sections, square bar and angle iron) commercially.

The company boasts a new state of the art straight line rolling mill which allows it to produce bigger sections. Unica also has achieved ISO 17025 accreditation for its world class in-house laboratory featuring sophisticated equipment for accurate testing ,which enables Unica to issue the 3.1 certificate to its customers.

Having established itself as a leader in the local South African market for its sections, Unica is ready to open doors for rest of Africa.

TÜVRheinland CERTIFIED

ISO 9001:2015, ISO 14001:2015,
ISO 45001: 2018 accredited

www.unica.co.za

012 719 9736| info@unica.co.za
9th Street Erf 87, Babelegi, Pretoria, South Africa

A division of the UNICA GROUP

Strength & Beyond
UNICA IRON & STEEL

Manufacturers of Light & Medium Structural Steel