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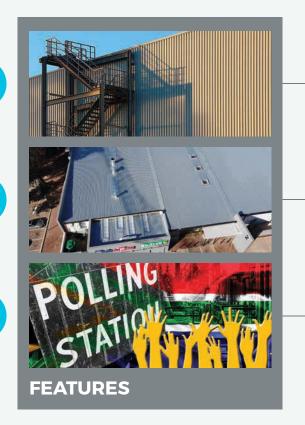




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THE SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

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SAISC COMMENT

PAOLO TRINCHERO CEO. SAISC

REFLECTIONS ON Q1, AND THE ROAD AHEAD

"LIKE ALL STEEL PEOPLE WE CONTINUE TO WORK HARD TO GET THROUGH THIS PERIOD AND ENGINEER OPPORTUNITIES

WHEREVER POSSIBLE."

The first quarter of 2019 turned out to be quite a challenging one. Internationally we still have trade tensions and potential slowdowns, and the South African elections are only a few weeks away. I need not mention load shedding, the construction, mining and manufacturing industries, business rescues and the like. The Civil Construction Index for the 1st quarter of 2019 is the lowest on record (8). Let that sink in for a moment.

Like all steel people, we continue to work hard to get through this period and engineer opportunities wherever possible. Growth may be slow after the elections, but I am optimistic that we will start to see a gradual improvement in the second half of the year. The SAISC is committed to promoting the positive story of steel to all industry players, decision makers, and customers. This is not some flash in the pan marketing trick. We are well aware of the state of our industry, but we must not forget its abilities and potential, its skills base and its ability to recover and grow.

We have been meeting with major clients and SOE's since January as we recognized the reduction in workloads as a serious concern for the industry. This includes designation and localization which would assist in a low growth environment.

The dti has assisted on a number of projects and we thank them for their time and effort. Tariffs and their implementation are an ongoing challenge but we are hopeful that progress will be made for the downstream industry.

We kicked off our Steel Academy courses for the year with Business Development in the Steel Industry, Social media 101 and a Basic Connection Design Course. SASFA ran their builders course and SAMCRA lectured on CPD courses in East London and Port Elizabeth. I am happy to report that they were all well attended. We are experimenting with online courses so please keep a lookout in May and June.

The Industry Breakfast in Gauteng in February provided some thought-provoking ideas and technologies to unblock our industry and move it into the 4th industrial revolution. We hosted a similar event in the KZN region in the second week of April.

The SAISC and its divisions strive to be the marketing and business development champions for the steel construction and related manufacturing industry throughout 2019. We are hoping to continue to make progress on Multi-Storey Steel Framed Buildings and together with

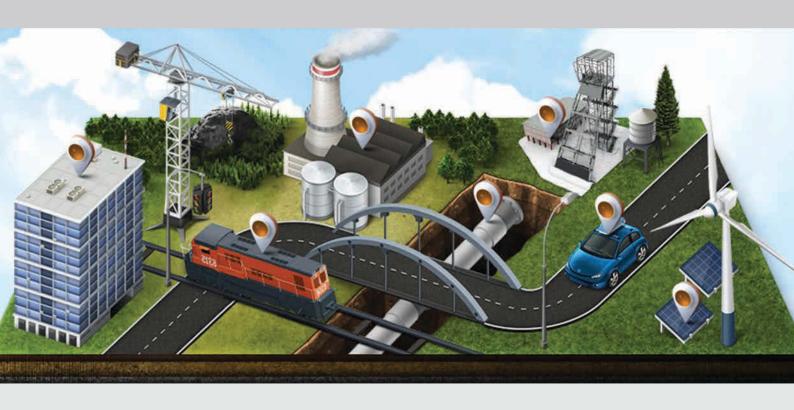
the University of Stellenbosch, CUT and the dti we will finally begin full-scale fire testing of the SAISC Modular Office Building concept. Steel Bridges (Pedestrian and Road) provide additional opportunities for the industry long term and we have had meetings with the Johannesburg Roads Agency and SANRAL.

Steel is an important part of the mining industry and we are hopeful that the policy in the Mining Industry will improve and that we can continue to collaborate with industry in the future.

The Informal sector needs some attention from us and we would love to hear your ideas on how we can assist in nurturing small business.

Lastly, we need to continue to develop and implement marketing initiatives to counter competing products. We have a few studies in place and will be reporting back over the next few months.

Steel construction has a number of favourable policy support measures with regards to fair trade and many have been rolled out across our subassociations to widen the net as far as possible. There is still much work to be done but co-operation amongst the membership continues to be a necessity.



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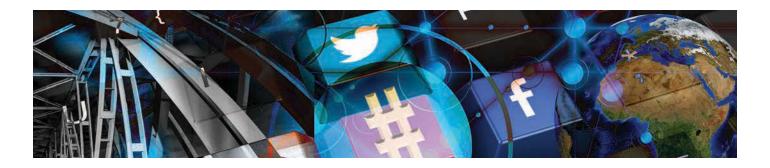
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EDITOR'S NOTE

DENISE SHERMANMARKETING MANAGER, SAISC

ARE YOU MISSING OUT ON MARKETING OPPORTUNITIES?



Have you found yourself asking "Is social media even relevant for the Steel Construction industry?" or "Denise, what is a hashtag, how does it work and why should I care?" or "What the heck is this #PositiveStoryOfSteel I keep hearing about?"

Pull up a chair, grab a cup of coffee and let's get to settling your ambivalence about this under-utilised marketing tool. In this editor's note, I'd like to demystify some social media jargon, and hopefully – help shed a bit of light on some of the social media marketing opportunities you may be missing. Let's cover some basics.

What is a hashtag?

"A hashtag is a type of metadata tag used on social networks such as Twitter and other microblogging services, allowing users to apply dynamic, user-generated tagging which makes it possible for others to easily find messages with a specific theme or content." (En.wikipedia.org, 2019).

In a steel industry context, using hashtags effectively can help you reach

potential clients (specifiers, architects, and engineers) by enabling them to see the content you are posting. For example, Architects on Instagram may follow the #Architecture hashtag. People actively search for topics that interest them. If you post (well composed and visually interesting) pictures of your project, and add relevant hashtags, you will boost your visibility with potential clients and/ or business partners.

What is the #PositiveStoryOfSteel?

There is enough soul-sucking, depressing news out there. We'd like to bring the focus back to the capability of industry and the fantastic work that gets done, despite the many obstacles faced. Adding the #PositiveStoryOfSteel hashtag to your company's social media posts helps to shine a spotlight on what our industry produces.

Why does your business need to be on social media?

Simply put, social media provides an opportunity to showcase what your company is capable of.It gives people a chance to see examples of the work

you've done as well as the culture of your organisation. It's one of the first places where people start making decisions about whether or not they want to do business with you. In a highly competitive environment, having a website is not enough. Having a presence on widely utilised social platforms, and posting quality content, will help to drive traffic to your website, where (hopefully) you have the conversion mechanisms in place to guide them along the journey from visitor to customer.

How can your business get started with social media?

If you'd like to explore this powerful marketing channel, but you're not sure where to start, we'd like to help. The SAISC offers a free 30-minute consultation session to members to review their current social presence and advise on the way forward. We've partnered with service providers we know and trust to assist our members with setting up and maintaining their social media presence.

For more info, contact Denise via email denise@saisc.co.za

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FEATURE

DENNIS WHITEDIRECTOR, SAMCRA

STATE OF THE METAL CLADDING INDUSTRY

Like most industries associated with the greater construction industry, the metal cladding industry has contracted in recent years. Currently, the metal cladding industry consumes upward of 220 000 tonnes of coated steel annually and is comprised of 2sectors namely formal and informal with a market value of R4.3 billion or 55 million square meters of cladding.

The formal sector covers mainstream building which is regulated by the National Building Regulations and other National Standards. The informal sector embraces the smaller emerging contractors and builders plus DIY where materials are invariably sourced from builders merchants. Unfortunately, unscrupulous providers sell non-compliant inferior thin gauge materials with minimal protective coatings based purely on price. Structural performance, public safety, and durability are invariably disregarded. The problem is particularly acute in rural areas which are currently exempt from compliance with the National Building Regulations. By mass, the formal sector accounts for 55% whereas by area the informal sector represents 60%.

The range of products available varies from traditional pierce-fix generic systems such as corrugated iron and box rib (IBR) to sophisticated world-class concealed-fix profiles with onsite rolling facilities all profiled from coated coil produced to internationally recognized standards. Unfortunately, the national standards for cladding have not been updated since the early 1990s. There is a

shortage of technically competent personnel plus skilled artisans for the installation of the cladding systems. This also applies to inspection and watchdog authorities. Sophisticated systems require greater skills and attention to detail, they are less accommodating when it comes to the alignment of supporting structures and onsite handling. Another problem is the inadequate or inappropriate requirements defined by specifiers which is in turn compounded by indiscriminate substitution, resulting in the client's expectations not being fulfilled. There has also been an increase in the number of unscrupulous profilers supplying imported under specification materials into the formal sector.

This situation is exacerbated in the informal sector where merchants' sale personnel have little or no knowledge of the structural performance, durability or compatibility of the products they sell. There is seldom a choice in the quality of products available. Price is invariably the only criterion. As an example, a 1.2% increase in price for a galvanised coating will offer a 25% increase in the corrosion resistance of the coating thereby reducing maintenance costs. Since 2014 large quantities of inferior corrugated cladding have been imported from China.

Lack of integrity coupled with the decline of enforcement by government departments continues to impact negatively on the metal cladding market and construction as a whole. Since the formation of the Southern African Metal Cladding & Roofing Association (SAMCRA) in October 2013, the association has been working tirelessly to address the shortcomings of the industry and to restore its credibility. This has not been without its challenges, the most formidable being the inertia of government departments and agencies to fulfill their function. The SABS has finally agreed to a revision to the 1991 code of practice for metal cladding. A review of the SANS 10400 series 'The application of the National Building Regulations' is in its seventh year and still going. One area of success has been the acceptance by the National Regulator of Compulsory Specifications (NRCS), which is the controlling body for the implementation of the National Building Regulations that all coil used for the manufacturer of metal cladding is to carry an indelible mark, at regular intervals, containing the manufacturer's name, metal thickness, grade of steel, description, and thickness of coating/s. This requirement is embedded in the new NHBRC manual and the soon to be released SANS 10400-L 'Roofs'. Work has begun on a review of SANS 1273 'fasteners for roof and wall coverings.' In addition to SAMCRA workshops to university students and member technical and sales personnel, a group of members have been presenting regular CPD workshops to specifiers all of which have had a positive impact on the quality of contract documents being issued. SAMCRA have established a library of technical guides together with a consulting service.

PROJECT PROFILES





METAL CLADDING









Client/Developer - Whale Coast Village Mall (Pty) Ltd, HCI Propcom (Pty) Ltd, Sandbaai Development Trust & Shoprite Checkers
Architect - JL Design and Bentel Associates International | Structural Engineer - Bigen Africa Services (Pty) Ltd
Quantity Surveyor - MLC Quantity Surveyors | Project Manager - MDSA Project Management
Main Contractor - Isipani Construction | Steelwork Contractor & Steel Erector - Mazor
Cladding Manufacturer & Supplier - Safintra Roofing | Cladding Contractor - Cladco Projects

What is the purpose of the structure/project?

The purpose of the Whalecoast Mall project was to construct a world class regional retail centre, which would provide a welcoming shopping experience. The centre accommodates for both the local and outlying neighbourhoods,

A key requirement of the project was that the aesthetic of the centre should compliment the area and not detract



from the natural beauty of the surrounding environment. Great care was taken to ensure that the building would not 'overpower' the site and block all views of the coastline from the R43. Sufficient amenities and parking were provided to do this efficiently and provide users with a good shopping experience.

How did the project team work together?

The concept design was smoothly co-ordinated between architect and structural engineer. The structural engineer together with steel contractor workshopped the concept to make use of the lightest structural members without compromising the aesthetic and function required by the architect and client. Models were shared to assist in reducing clashes on site and reducing on site alterations to prefabricated steel.

Tons of structural steel used: 784 tons (including wall stiffeners and shopfront supports)

Structural profiles used: Mainly I's, H's, C's and angles, cold formed lipped channel purlins. Small amount of circular hollow section

Cladding material: 0.53mm Colorbond Ultra Matt Cladding profile: Saflok 700 by Safintra Roofing Cladding area/coverage and tonnage: 33 000m²











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Safintra offers full technical support services from all branches.





















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Nominator - AECOM | Client/Developer - Mercedes-Benz South Africa | Architect - AECOM Structural Engineer - AECOM | Quantity Surveyor - Stefanutti Stocks | Project Manager - AECOM Steelwork Contractor - Impact Engineering | Cladding Manufacturer - Safintra | Cladding Supplier - Safintra Cladding Contractor - Chartwell Roofing | Corrosion Protection (Paintwork Contractor) - Insimbi Coatings

What is the purpose of the structure/project?

In order to reconfigure its processing operations for a new model, Mercedes-Benz South Africa (MBSA) embarked on an upgrade project for a facility based in East London. One of the upgrade works involved the construction of a new logistics building on J-Site within the East London plant. This involved the construction of amongst other structures, the following:

- a) J-site logistics building,
- b) Gate house to replace the existing
- c) Hawker stalls to replace the existing
- d) Dry link connection between the J-site building and the existing F11 assembly building
- e) Truck canopy

The client opted for a turnkey contract solution for the project and Stefanutti Stocks were appointed on February 2017. AECOM were appointed by Stefanutti Stocks as their design consultants.

What was the brief to the architect?

The client aimed to construct a new logistics building with optimum accessibility for suppliers as well as connection to assembly to feed the manufacturing process, with the building footprint maximising all available space on the site. Energy saving initiatives were a key consideration which needed to be incorporated into the design. The principal design philosophy was to provide a robust and sustainable

structural solution, ensuring the space would be suitable for its intended use.

Give a brief description of the structural framing. What type of sections were used (e.g. hollow, cellular, I-beams etc.) and why?

The logistics building is approximately 21 000m². A gridline system of 28m in the East-West direction and 15m in the North-South direction was used. The logistics building has a structural steel roof with a slope of 2% (1.2 degree pitch). Hot rolled IPE purlins are spaced at 3.0m and span 7.5m between the trusses. The trusses span 28m and are supported on girders spanning 15m. The trusses and girders are 2.2m deep and consist of UC's for the top and bottom cords and double angles for diagonals. A clear height of 10m is allowed for between the floor and underside of the roof trusses. All services are therefore located within the roof cavity. To maximise the usable floor area and ensure flexibility for racking layouts, no vertical bracing was used. This also ensured that expansion of the building could take place in all directions. To obtain lateral stability, the concrete columns were used up to 8m above floor level and catladders with a perimeter parapet were provided for maintenance.

Give a brief description of the cladding process (complexity, difficulty, innovation etc.)

The exterior of the new building is largely an aluminium cassette facade to avoid corrosion, with corresponding insulation. The roof is constructed with 2 layers mineral torch-on plastomeric waterproofing membrane that is each



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4.5mm thick on 60mm fibre rock wool insulation board. COLORPLUS AZ150 Seaspray 0.55 Widek for internal cladding and COLORPLUS 0.80 AZ150 Seaspray Saflok material for inverted roof. The non-standard 0.8mm steel Saflok sheet was rolled and load tested at the Safintra premises in Pinetown. This was required due to both the load and spans being beyond the product catalogue guidelines, as well as the sheeting used in an inverted position to provide almost continuous support to the insulation board. A complete mock-up of the roof system was built at Safintra's premises for testing purposes as well as on site for the client's approval.

Were there any challenges in the fabrication of the project from the engineer's design - if yes, please tell? Tell more about fabrication and erection process if it was complex, difficult, innovative etc.

Few fabrication and erection challenges were encountered due to the fact that the concept design involved all parties – steelwork contractor, shop drawing detailer and the steel erection team. Available sections, lead times, splice positions and section lengths, transport and erection were all discussed and agreed on before final design commenced.

What is special/unusual/innovative/aesthetic about the steelwork/cladding in this project?

The roof design loads on the logistics building include future PV cell installation, the self-weight of the built-up roofing system, technical services and conveyor loading. This loading is far in excess of the average industrial building loading, resulting in a potentially heavier overall structure. Savings on the steel tonnage was however made by breaking away from the norm in utilising hot-rolled purlins, designing out the requirement for sag bars, and

truss and girder connections were fashioned to eliminate the need for gusset plates.

How did the project team work together (e.g. contractor involved early, challenges/ease of communication etc.)

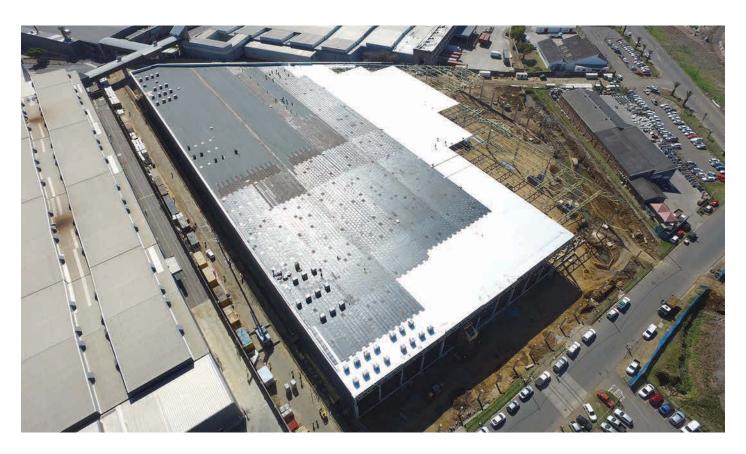
All design and contracting disciplines on the project worked within an integrated 3D environment. With the ability to interrogate models virtually before breaking ground on-site led to significantly less RFI's and reduced critical clashes on-site when compared to traditional 2D based project workflows. Consultants generally create design intent models up to about an LODev (Level of Development) 300, on the J-site project we were able to run clash detection biweekly against the design Revit models using a combination of Autodesk BIM 360 Glue and Autodesk Navisworks software. The once fabrication models were completed by the steel fabricator in Tekla software, we were able to do our final clash detection checks against with models up to LODev 500. At this year's Daimler Supplier Awards, which recognises Daimler's suppliers for outstanding performance, Stefanutti Stocks (Pty) Ltd was recognised for its excellence in the Partnership Category for the Mercedes-Benz Logistics Warehouse and Gate Complex. This is a reflection of the collaboration on the project between all parties.

Tons of structural steel used: ±818 tons including truck canopy

Structural profiles used: Hot rolled open sections, cold formed lipped channels

Cladding profile/type used: COLORPLUS AZ150 Seaspray 0.55 Widek for internal Cladding and COLORPLUS 0.80 AZ150 Seaspray Saflok material for inverted roof

Cladding area/coverage and tonnage: 23 500m², 35 tons (roof), 8 700m², 155 tons (side)





Nominator - Global Roofing Solutions | Client/Developer - Key Stone Properties | Architect - Hammerhead Designs
Structural Engineer - Axiom Engineers | Main Contractor - Gothic Construction
Steelwork Contractor & Steel Erector - Nance Engineering | Cladding Manufacturer - Global Roofing Solutions
Cladding Supplier - Global Roofing Solutions | Cladding Contractor - Chartwell Roofing (Pty) Ltd

Campus Square is a convenience centre situated on the corner of Kingsway and University Road, Melville. Anchor tenants include Pick 'n Pay, Woolworths and a new Dischem, while the restaurant offering includes an upgraded Dros, RoccoMamas, enlarged Wimpy and a new Nandos. The centre offers food, shopping, and convenience all under one roof and it is loyally frequented by students of the nearby University of Johannesburg.

The centre was recently extended and the brief to the architect was to create a very lightweight steel roof, with sidelights facing south to avoid heat gain. A curved aspect was required on the sidelights to create a unique appearance.

The extension of Campus Square was envisaged in steel from the start. Structural steel trusses (consisting of angles) at an average depth of 1m were used to span between 12 - 25m. I-beams were used where the roof span was less than 12m.

When tying into an existing building, there are usually unforeseen challenges that arise. With the extension of Campus Square, the existing building dimensions were not exact and the on-site dimensions weren't measured prior to fabrication, which lead to the design team requiring additional brackets that had to be designed to enable the elements to span from column to column.

Another challenge that arose was that the designed steel members weren't always available when they were needed, which delayed the construction process. To overcome this challenge and meet the deadline, a similar sized element was then identified and specified for the project.

A further challenge was dispensing of water off the existing roof which had a large number of steps and angles and new roof which was higher, a large concrete gutter had to be created between the two roofs, which in turn was used to support the steel structure.

The roof is undoubtedly an innovative aspect of the project. The roof was designed according to the minimum requirements as specified by the code, which resulted in a very light weight roof. Klip Lok 700 by Global Roofing Solutions was specified for the 8 000m² roof.

Fortnightly meetings were held where the professional team and contractor would discuss issues, progress and program to ensure the project runs smoothly. The end result is a successful extension of a widely popular convenience centre in Johannesburg.

Cladding profile/type used: KlipLok 700

Cladding area/coverage: 8 000m²

Cladding tonnage: 4.8 tons



Fertilizer company Westfert required a massive warehouse to take advantage of favourable global conditions in the market. The large-scale dome in Hoopstad that was built is described as the biggest in the southern hemisphere.

The main objective of the structure was to create an inland fertilizer storage facility where various basic granular fertilizers can be blended and bagged for the specific needs of farmers. The structure is 116 meters wide and 152.25 meters in length and covers approximately two hectares.

There are no supporting pillars within the structure, which creates enough space for two Airbus 380s to fit inside the building. A triangular pipe frame structure was use for the trusses. A single 194mm diameter bottom cord pipe and two 140mm diameter pipes were used as top sections. The bracing is 76mm pipe and all the sections are 3mm thick.

Creating a structure of this scale wasn't without its challenges, says project engineer Hentie Park. One of the main challenges was to ensure that all the trusses were rolled on a 96m radius. Secondly, all the welded connections were profiled with a CNC plasma cutter to ensure exact fit. Each truss consisted of 10 sections that were joined by specialised welding on site. Articulating joints were designed where the truss connected to the concrete plinth. Two halves of the trusses were lifted by two 25 ton cranes and the centres were connected with three pins – one for each cord. The latter reduced the election time and costs significantly.

The unsupported span of this building is 116m. Global Roofing Solutions supplied approximately 27 000m² of Klip-Tite and NuRib for the product and 127m long sheets were rolled on site and clipped into position.

The dome is the fourth largest such structure in the world and it will be able to house approximately 200 000 tons of

fertilizer. Thanks to the new dome warehouse, Westfert will now be able to buy input ingredients such as urea in bulk when exchange rates and prices are at their most favourable.

Cladding profile/type used: KlipTite & NuRib

Cladding area/coverage: ±27 000m²

Cladding tonnage: ±160 tons



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Nominator - DAVGO Steel Construction | Client/Developer - Shree Property Holdings | Architect - Zadar Studio
Structural Engineer - Steelkon Projects | Main Contractor - Shree Property Holdings
Steelwork Contractor and Steel Erector - DAVGO Steel Construction | Cladding Manufacturer - Global Roofing Solutions
Cladding Supplier - Future Steel | Cladding Contractor - DAVGO Steel Construction
Corrosion Protection (Paintwork Contractor) - DAVGO Steel Construction

The Inoxa Manufacturing Facility project came about due to an international crockery manufacturer's desire to open a manufacturing facility in South Africa. The facility manufactures products for the South African market, as well as for export.

The client for this project was Shree Property Holdings (SPH), who developed the property for lease to Inoxa Manufacturing.

From the start of the project, SPH consulted with both Davgo and Steelkon Projects to find the most suitable structural steel solution for the specific site and client requirements. The tenant required a linear manufacturing process and product flow, which led us to the current design of a 50 metre wide by 350 metre long building.

The building is divided into 3 distinct zones, each with it's own characteristics in terms of steel structure.

The first zone is the Manufacturing Zone, which measures 50m by 143m. This zone comprises two 25 ton overhead crane gantries, each with a span of 23m, both of which run the full 143m. The crane rail height is at 9.2m above FFL, and hence the eaves height is at 11.5 above FFL, to accommodate the gantry cranes. Lattice type columns were designed for this zone so as to mitigate against the horizontal deflections caused by forces induced by the cranes onto the rails. The crane beams were designed as compound members comprising I-section beams with parallel flanged channel section caps.

The second zone is the Polishing Zone, which an extent of 50m by 71.5m. Here the manufactured products are cleaned and polished before proceeding to packaging. This process requires ample headroom and the most uninterrupted floor space economically possible. For these reasons, the eaves height of 11.5 was retained, and a centrally located lattice transfer girder was designed to span 3 bays (18.5m), which meant only 2 internal columns were used over the entire 2 600m² footprint of the Polishing Zone.

The third zone is the Warehouse Zone, which an extent of 50m x 136m. This is where the finished products undergo QC, before being packaged, and then stored whilst they await distribution. Since the tenant did not require high level racking, the eaves height for this zone was reduced to 9m above FFL. The same roof design as the Polishing Zone was used to keep internal columns to a minimum.

Added to the main building, a semi-detached office structure was also designed and supplied to suit the tenant's needs. The office structure comprised a suspended slab and roof, with floor area of both floors totaling 5 000m². This was originally supposed to be designed as a concrete framed structure with a steel roof, however due to the tight time constraints the development faced, it was decided to rather use a steel framed structure to support the pre-stressed concrete T-beams and topping slab. The main load carrying beams had to be deep I-sections since the spans varied between 7.5m and 9m. These were compositely tied to the slab by means of Y12 shear connector bars.



The office roof also used a lattice transfer girder in the centre of the 35m span width, resulting in only 4 internal columns over the $2\,500\text{m}^2$ footprint.

The steelwork and cladding portions of the job were completed on time and without any problematic incidents, mainly due to the meticulous design, detailing, and planning of the steelwork with one of the main objectives being to minimize the complexity of the rigging. One of the challenges faced was the interaction between the rigging of steelwork and the rigging of pre-cast concrete panels, since the latter required steel members to be temporarily removed so as to allow the concrete panels to be installed and plumbed with ease.

The end result of this project is a landmark building on the KZN North coast, which is both functional and aesthetically

pleasing externally and internally. When standing inside the structure, one is not only struck by the pleasing geometry, vast uncluttered space, and striking yellow paintwork; but also by the beautifully detailed lattice columns and girders which create curious geometrical shapes as you move around within the building.

A very satisfied client also adds to the prestige of being involved with this project.

Tons of structural steel used: 500 tons

Structural profiles used: I-sections, H-sections, Angles, CHS, Crane Rails, CRLC

Cladding profile/type used: IBR 686 Colourplus AZ150 Cladding area/coverage and tonnage: ±20 000m²



THE 'POLITICS' OF STEEL

SA INSTITUTE OF STEEL CONSTRUCTION CALLS FOR SUPPORTIVE POLICY-MAKING AND EXPANSIONARY MIND SET GOING FORWARD



At present, business in South Africa is 'marking time' as it awaits the outcome of the elections due to take place on 8 May. For the South African steel construction industry, the fervent desire is that the post-election dispensation will go a long way towards resolving the crisis in which the industry currently finds itself.

This is according to Paolo Trinchero, CEO of the SAISC, steel industry veteran and a dedicated lobbyist for and champion of 'all things steel'.

It is the sincere hope and expectation of steel industry representative body the SA Institute of Steel Construction (SAISC) that post-election public sector policymakers will view the steel value chain as the pivotal contributor to the South African economy that it is; and will take into consideration the 'larger picture' – adopting a more holistic view of the steel construction industry.

Since 1956, the South African Institute of Steel Construction (SAISC) has represented all facets of the steel construction industry – as well as those parties with an interest in the use of steel in all the sectors of business and society as a whole.

"Since our inception in 1956, the mission of the SAISC has been

to promote the well-being of all our stakeholders in the local steel industry – upstream, midstream and downstream.," Trinchero points out, adding that a key example of this is the lobbying and designation, localisation and downstream tariff implementation which the SAISC spearheaded in recent years.

Steel forms the foundation and pillars upon which any modern economy is built; and, as such, is essential to every single industry sector. "In its most simplistic form, consider agriculture: no steel – no tractor – no food.

Certainly from a broader pan-African perspective, without a healthy local steel industry, we will not be able to integrate and develop either South Africa or the rest our continent,"

Trinchero comments.

He explains that what the steel sector – and the country as a whole – urgently needs is effective policy that will generate confidence in the viability of South Africa. This, in turn, will boost competitiveness when it comes to attracting foreign direct investment – translating into projects which will, in turn, stimulate the consumption of steel in all industries and walks of life.

"What will engender real confidence is if potential investors can see that

in South Africa after the May 2019 elections, there is actually some improved cooperation between government, the private sector, and labour, to sustainably grow the industry," he adds. However, in today's acutely constrained trading environment – with the top five construction companies in various stages of economic distress, and many businesses adopting the 'life-boat' mentality of 'every man for himself' – one has to ask what the root economic causes are for the current crisis in the steel construction industry?

Trinchero explains that the current 'perfect storm' scenario is essentially a combination of an exceptional increase in costs, coupled with very low demand: "In the past decade South Africa has experienced soaring electricity prices combined with uncertainty of supply – as starkly illustrated by the recent nightmarish bout of load shedding which has seen many businesses on the brink of collapse. In addition, transport – the literal arterial lifeblood of the economy - comes at a cost which tends to render us uncompetitive on the global stage.

"Furthermore, our labour costs have been rising faster than the rate of inflation," he adds. These factors combine to make running a competitive steel mill - as well as downstream steel businesses in South Africa – problematic to say the least."These challenges have had a 'knock-on' effect, impacting the downstream steel sector adversely and - in a harmful and vicious cycle - this sector's distress is also detrimental to the primary steel mill; as well as several other smaller steel 'mini-mills' struggling to grow and succeed in the current economy," he points out. However, South Africa needs a competitive supply of steel – otherwise, the downstream sector will inevitably look to foster their competitiveness by importing rather than buying locally.

However, the benefit of imports is comparatively short-term, explains Trinchero, as, in the long-term, it has a negative effect on job creation." Again this has a knock-on and vicious cycle effect: with fewer people working, fewer people are able to afford products which are made of steel," he elaborates. Regarding finished goods, it is of great importance that sustained attention is given to fostering the well-being and prosperity of the downstream steel sector – the ultimate manufacturers

of finished steel goods. Without a healthy downstream sector, the demand for steel will be severely weakened. In South Africa, one cannot discuss imports without also debating the issue of tariffs and safe-guarding

From the point of view of the SAISC, the imposition of tariffs can be a useful trading mechanism – but has to be done with a very high level of competence and careful thought – so that it is balanced and ultimately well-policed."What we certainly do not want to see in South Africa is the dumping of sub-standard 'grey" goods from other parts of the world," he continues.

"To return to policy considerations: in order to kick start our economy, we need clarity on mining policy, including what the implications of the Mining Charter will be for local business. We have significant mineral resources in South Africa, and if mining gains momentum, it will stimulate manufacturing which will consequently create the need for more construction using steel.

However, the roadmap to recovery cannot end there, he emphasises."We

need to see an infrastructure pipeline for the construction sector, and repairs and maintenance to keep manufacturing facilities, power generation and other critical sectors operational. We need real measures in the form of accessible, realistic government incentives to assist companies in the revitalisation phase. From the SAISC's perspective, we are also engaged in doing all we can to foster increased cooperation with sectors allied to the steel industry, such as mining and manufacturing. It is only through greater networking and collaboration, and mindset which considers all opportunities, big and small – that current industry contraction will eventually turn into expansion," he asserts.

"In summary, while these are the nonpartisan views of the SAISC, broad stakeholder consultation indicates that they are also shared by many within the local steel sector," says Trinchero."We trust that once the election results have been announced, our government will take very prompt and firm steps to implement the measures required, and ensure the future sustainability and prosperity of the steel construction industry and, consequently, South Africa as a whole," he concludes.





TECH TRENDS

AMANUEL GEBREMESKEL
TECHNICAL DIRECTOR, SAISC

SMART ELEVATED FLOORS

Elevated floors make up some of the more technical and expensive components of industrial, commercial and residential building frames. They come in many forms and can make up the heaviest part of the building. As such it makes sense to focus attention on them and provide guidance on what types of floors are available in South Africa and the benefits of each type of floor.

Chapter 12 of our Red Book contains useful information on Metal Flooring types that are typically used in industrial applications. These include grating or open grid flooring, expanded metal flooring, profiled plank flooring and solid plate flooring – commonly known as Vastrap flooring when patterned.

Metal flooring is used extensively in the mining industry, in process and chemical plants, petro-chemicals refineries, cement and fertilizer plants, pulp and paper factories, power-stations and utilities such as sewerage works and water treatment plants. The flooring is generally required to support pedestrian and light vehicular traffic and can provide excellent elevated access in areas that are congested by equipment when used as platforms and walkways.

The advantages of the open types of flooring are that they represent an economical, lightweight system that permits the passage of light and air to areas below, they are virtually self-cleaning and do not allow dust or rubble to accumulate, and allow oil and water to drain off easily. Solid plate floors are commonly used where

spillage has to be contained or where a high level of hygiene is required.

When it comes to commercial and residential buildings, as well as mezzanines in industrial buildings, steel is typically used as permanent shuttering with concrete making up the rest of the flooring. Various

decking products and their technical specifications are provided at the back of the Red Book. The common thread in all these systems is the use of slightly more steel and less concrete as compared to conventional cast in place or precast systems. Not only are such floors lighter in weight but they also consume fewer materials and





Grating Flooring.

more importantly involve the use of less fresh water and hassle.

They do this in three ways. Concrete on steel permanent formwork reduces the overall weight of structures and there are savings in water usage simply because less material is used. Secondly, the use of slightly more steel and less concrete allows for savings because much of the water used in steel production need not be fresh drinking water. The use of steel both as formwork and permanent structure reduces waste and debris on site and this has serious implications on the use of fresh water for site cleaning and waste removal.

Finally, there are light steel floor systems that are typically used in residential and smaller office buildings. These systems are composed of lipped channels or trusses spaced at close proximity to support a flooring system. This flooring system can be made from steel pans, fibre cement board, Oriented Strand Board or a host of other flat sheets that can support floor loads between the channels and trusses. In many cases, the boards are built up to provide sound isolation and heat insulation, while a ceiling system below the channel or truss can also help in this regard.

Light steel floor systems are typically constructed as dry floors – without concrete or screed pour – and this makes them environmentally friendly. Not only are the sites unusually clean but there is little debris to take back from site. Moreover, disassembly possible re-use of building materials is also possible at the end of the life of the building.

The Red Book is an incredible repository of useful information on how elevated floors can be constructed using various methods that are easy to design, fabricate and install. These floor types are applicable to industrial, commercial and residential buildings. These floors are preferred because – as compared to competing systems – they are easy, clean and sustainable ways of constructing elevated floors.



VERSATILE RANGE OF EXPANDED METAL PRODUCTS

'VITAL' TO MANY INDUSTRIES

"When it comes to expanded metal products, the only limit to their applications lies within the human imagination," says Glen Pringle, Technical Director at Vital Engineering.

As a manufacturer with some 80 years of experience in the production of expanded metal products, safety hand rails, floor gratings and stair treads, the company is yet to encounter a limit to the fields of application for their products.

"Expanded metal products and their related applications can vary from our very popular base industrial range of meshes – typically used as walkways, screenings, to oil filter encasements; and small aperture meshes which are used as speaker covers, rodent control in phone towers, or to protect solar geysers from hail – and everything in between," Pringle says.

Expanded metal is also increasing in popularity in architectural applications, where functionality like noise and light deflection is combined with interesting aesthetic effects.

There is good reason for the popularity of this range. Expanded metal possesses some very attractive inherent qualities. It has an excellent

weight-to-strength ratio, and has an advantage over welded products, the material does not have localised weak points because it is made from a single sheet of metal. It is furthermore costeffective and the material, structural design, and material-to-air ratio can be tailor-made to the customer's requirements.

"We pride ourselves in producing world-class quality products and in going the extra mile to help our clients find the perfect combination of material and design for their specific needs – whether it be mild steel, copper, or stainless steel, varying patterns, large or small aperture," he explains.

"Our decades of experience – coupled with a spirit of innovation – has led to the development of various distinctive products. As an example, we are the only producers of non-slip serrated walkway mesh in South Africa," he

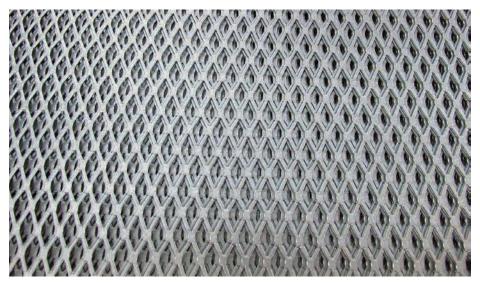
Pringle however cautions that customers should be discerning when choosing expanded metal products, as there are certain visually subtle defects such as sharp edges or small tears in the joints that could be indicators of compromised structural integrity.

On the other hand, there could be variations in product thickness which might appear as material flaws when, in fact, it is inherent to the manufacturing process. When these variations fall within the specified product tolerances it is perfectly normal. He further advises customers to always choose products that adhere to SANS or ISO standards, and which are manufactured by a trusted supplier with an excellent industry track record.

The company has been privileged to supply their products for various new and exciting projects recently. This includes some of the newly built coal mines where the Vitex expanded metal range has been used for machinery safety guards and in the manufacture of mine walkways; as well as for certain security applications in gold mines.

"We are very proud to have supplied our expanded metal products to these projects, as this demonstrates that the Vital Engineering name and our expanded metal brand Vitex have become synonymous with product innovation and versatility – underpinned by meticulous attention to safety and quality," concludes Pringle.







GOLF DAY 2019

13 JUNE 2019. RANDPARK GOLF CLUB

Format of play:

28 Four Balls
2 Scores to count
18 Handicap for players without a handicap

Times:

Tee-off 10:02am to 12:02pm Players dinner with prizes from 18:00pm

R6 500 per 4 ball team includes:

2 x 2 Seater Carts
2 x Caddies per team
Player shirts, caps and goodie bag
Lunch, Dinner and Prize function
Selected Wines at Dinner
(cash bar for other drinks)

Player booking enquiries:

Liezel Weber: liezel@saisc.co.za











For more information on **sponsorship opportunities** for this event, contact **Liezel Weber** via email - **liezel@saisc.co.za**



SAMCRA FEATURE

DENNIS WHITEDIRECTOR, SAMCRA

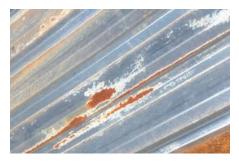


ALI BABA **BEWARE**

We never cease to be amazed at the ingenuity some vendors and contractors will employ in order to make a dishonest buck. Unfortunately the cladding industry is not immune to this scourge.



Misaligned translucent cladding & flashing sealed with bandage that will be destroyed by differential thermal movement.



Irreparable damage due to improper site storage



Leak from dent caused by overtightened fastener covered with patch.

Beginning with the coil from which cladding is rolled devious profilers exploit the rolling tolerance of ±0.02mm on the nominal thickness of the coil by using under gauge material. On 0.5mm the saving is 4% and on 0.3mm 7%, using narrower coil will save a further 1%. Add to this savings from thinner protective coatings and the total saving is 7% and 9% respectively. What is overlooked is that the saving on the protective coating can reduce the service life by between 10 and 20% which can increase to 40% on painted material not to mention maintenance costs. Exactly the same applies to flashings and other ancillary items. Many builders' merchants no longer state gauge and coating thickness on their price lists.

It is our considered opinion that some 38% of the cladding sold in the RSA was produced from questionable coil most of which was imported. Whilst the bulk of this cladding was sold into the informal sector ever increasing amounts are appearing in the formal sector. Although unbranded imported colour coated coil has been offered as Chromadek for several years a disturbing recent development is the sale of coils with fraudulent labels.

10 000 Tonnes of corrugated material was imported from China at a declared average F.O.B. price of R3 700/t against R11 600/t for galvanised coil ex China.

Volumes have been written about the shenanigans in the fastener industry which are proving even more difficult to address than with the coil. It is therefore vitally important to check that the cladding is being fixed with the fasteners recommend by the profiler. Remember warranties can be negated if the correct fasteners are not installed.

Probably the greatest collection of tricksters is to be found amongst roofing contractors including builders who think they are roofing contractors. Although there is a core of reputable roofing contractors the vast majority are not. Insist that the installation be undertaken by a contractor approved by the profiler, sadly outside of those with a national footprint most profilers do not provide such a service. Frequently we receive requests for assistance in solving problems on leaking roofs, only to find inadequate or badly fitted flashings, overtightened fasteners where the sealing gasket has been shredded or the washer dished or the cladding dented or a combination of all three and lap joints either inadequately sealed or not sealed at all. The indiscriminate use of paint-on sealer and membrane has reached alarming proportions. Material irreparably damaged due to improper storage on site.

When it comes to cladding Ali Baba aka specifiers, principal agents and consumers need to aware that they are being confronted by far more than forty thieves. Be meticulous when specifying your requirements and expectations, use the applicable SANS standards. Avoid using expressions such as 'to roofing specialist's detail' or 'suitably sealed' etc.

ABOVE ALL CHECK YOU ARE GETTING WHAT YOU SPECFIED.

The Southern Africa Metal Cladding and Roofing Association (SAMCRA) is comprised of members from coil producing mills, profilers, roofing contractors and suppliers of allied products all bound by a code of conduct to provide the best our industry has to offer.

CONNECT WITH SAMCRA: Contact: Dennis White Email: dennis@saisc.co.za Web: www.samcra.co.za



SASFA FEATURE

JOHN BARNARD DIRECTOR, SASFA



SASFA TRAINING COURSE

FOR BUILDING CONTRACTORS FEBRUARY 2019

SASFA has successfully presented its 5-day training course for light steel frame building contractors for the 28th time! The course was presented at the training facilities of Marley Building Systems, Roodekop, Germiston during the week 25 Feb to 1 March 2019.

The course is growing in popularity (it was fully subscribed), as an increasing number of building contractors, developers, architects and engineers wish to become more knowledgeable about LSFB, also on a practical level. Successful completion of the course is also a pre-requisite for applying for SASFA Builder Membership.

The course will be presented again in September 2019 in Cape Town.

The course is split into two sections:

Steel frame materials, components, and erection (3½ days), covering introduction to light steel frame building (LSFB), the steel making process and properties of coated steel sheet, followed by sections on foundations, manufacturing of light steel frames and trusses, construction tools, wallframe set-out, handling, loads on buildings, floor framing, wall framing, roof structures, planning and the installation of services, and

Internal lining, external cladding and insulation (11/2 days), covering the properties, manufacturing and benefits of glasswool insulation, acoustics, energy efficiency, environmental issues, storage and



The students pictured with the LSF structure they erected as part of the practical work of the course.



R. van Duyker and R. Watson from Robert Bosch SA, illustrating the use of Bosch's equipment.

handling of glasswool and tools and installation methodology.

This is followed by a section on gypsum <u>plasterboard</u>, covering properties, storage and handling, cutting, tools and application for walls, ceilings and finishing.

Finally <u>fibre cement board</u> for external cladding is addressed, including the installation of the <u>vapour permeable</u> <u>membrane</u>, sizes and availability of fibre cement - boards and planks, fixing accessories, installation guidelines, and door and window frame installation detail is presented.

To ensure that the theoretical concepts are well understood, the course includes a **practical component**, consisting of setting out of wall frames, squaring, levelling, and erection of wall panels, erection of roof trusses, installation of external cladding (FC boards, OSB and FC planks), insulation and internal lining (gypsum board), and internal joint finishing.

The students who enrolled for the course came from as far afield as Australia, Swaziland, Eastern and Western Cape, Limpopo and Gauteng. Most had some prior building industry experience. Current roles ranged from owners of their businesses to CEO's, site foremen, QS's, architects and engineers.

After completion, they all rated the course highly, especially mentioning the value of the practical work. At the end of the course, the students had to write a test to assess their understanding of the subject matter. Most of the students on this course passed, and received SASFA certificates of successful completion of the course. This brings the total number of students who have successfully completed this course since its inception in 2009, to 443.

The SASFA members who supplied support for the course and made it possible were Marley Building Systems, Saint-Gobain, and Marshall Hinds. Mike Hull (Hull Consulting) and Ntokozo Sibiya (Marley BS) presented the course material with John Barnard. As part of the practical work, Bosch Power Tools illustrated their wide range of equipment suitable for use in the LSFB industry.



STEASA NEWS

KEITUMETSE MOUMAKOE (K.M)
DIRECTOR. STEASA



THE SUITABILITY OF SPIRAL WELDED STEEL PIPES IN

MUNICIPAL PIPING APPLICATIONS

The issue of water security for South Africa not only circumscribes the entire water sector, but also has far reaching consequences across the entire economy of South Africa. It touches on growth and development of all sectors of our economy. In the context of the Department of Water and Sanitation's master plan, water security touches on many facets, including identifying future water sources for our growing population and the attendant future water resources development options, the operation and maintenance of water and sanitation infrastructure, the proper management of our water quality, Water Supply Services, resilience of our country to Climate Change Impacts and Water Conservation and Water Demand Management.

The rollout of water and sanitation infrastructure is a key step towards the realisation of ensuring water security and availability in our communities and has a plethora of value - added opportunities addressing employment, industrialisation, manufacturing, localisation and designation of material.

Spiral welded pipe is a 100% designated product as per treasury designated sector circular no.4 of 2017/2018 and a product that is suitably applicable





in municipal piping applications for the conveyance of water. Spiral welded pipe has been used extensively by many municipalities and metros in their water infrastructure projects with great success and sustainability. Examples of but a few municipal projects are as follows:

- TCTA Vaal River Eastern Subsection 125km water line. OD: 1 930mm X42, X52 & X65. Sintakote® coating.
- eThekwini Water and Sanitation 70km Western Aqueduct: OD: 610mm – 1 600mm Sintakote® coating.
- Komati Water Supply Augmentation Scheme 70km water line OD 813mm & 1 118mm API X42 & X52.
- N10 Pipeline (Bloemendal Delmas) 37km water line OD 610mm – API X42.
- Umbumbulu Water scheme 25km water line OD 457mm
 API X42.

Spiral welded pipe is designated because it can and is readily manufactured in South Africa, sufficiently meeting all local demand and in many ways superior to imported products designed to serve similar purpose, providing the design engineer to fully engineer a project to very specific needs.

Fully engineered system

The versatility and strength of spiral welded steel pipes enables customized performance-based designs to meet the criteria specified. Unlike other imported products that have been used by some municipalities, the type of steel can be selected to meet the specific strength and other physical/mechanical properties that are needed for a given application. The imported products can only be regarded as commodities as they limit the ability of a design engineer to engineer to specific needs.



The ability to fully engineer a steel pipe system, from the necessary wall thickness from 4.5mm to 20mm, to the type of integral jointing system needed, to the specific type of lining and coating based on the nature of the soils in which it is buried and the fluid it transports, to the inside-diameter required, make it one of the most versatile products available for use in Municipal applications.

The most critical water projects for many decades in South Africa where potable water is in high demand and must be transported from remote locations, have either used spiral welded steel pipes or have had steel pipe as a construction option. Availability of spiral welded steel pipes in sizes 20" to 100-inch diameters makes them ideal for critical water transmission projects. Of course, the ability to fully engineer a system results in significant cost savings.

CONNECT WITH STEASA: Contact: Keitumetse Moumakoe (K.M) Email: keitumetse@steasa.com Web: www.steasa.com

THE GOOD

UPDATES FROM OUR TEAM, OUR MEMBERS AND THE BROADER CONSTRUCTION INDUSTRY

NEWS

MEET THE NEW SAISC BOARD!

Our board has grown! Thank you to the industry stakeholders who have committed to investing their time and expertise. As an institute, we appreciate their insight, proactive approach and strategic input. We look forward to working alongside each of the board members for the good of the industry as a whole.

- [1] **Chairwoman** Nicollette Skjoldhammer (Betterect)
- [2] Vice Chair Tebogo Raaleka (Macsteel)
- [3] Treasurer Johann Strauss (KRU Detailing)

Board Members:

- [4] Amanuel Gebremeskel (SAISC)
- [5] Eileen Pretorius (Aveng Trident Steel)
- [6] Gaurav Nagpal (ArcelorMittal South Africa)
- [7] Granville Rolfe (Macsteel)
- [8] Johan van der Westhuizen (Global Roofing Solutions)
- [9] John Swallow (Cadex Systems SA)
- [10] Keitumetse Moumakoe (STEASA)
- [10] Kennedy Jimba (VOIDCON)
- [12] Michael Perimal (ISILO Steel)
- [13] Paolo Trinchero (SAISC)
- [14] Tim Tasioulas (TASS Engineering)





























TELL US YOUR GOOD NEWS!

Let us know what you're celebrating as a company, or what you're proud of that we can share with the industry! Email denise@saisc.co.za



THE SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

AWARDS 2019





BSi Steel

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Macsteel



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CATEGORY SPONSORS

LIGHT STEEL FRAME BUILDING CATEGORY: MiTek South Africa

FACTORY AND WAREHOUSE CATEGORY: Safintra South Africa

METAL CLADDING CATEGORY: Global Roofing Solutions

TUBULAR CATEGORY: Association of Steel Tube and Pipe Manufacturers







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Save the date for the 38th ANNUAL SAISC STEEL AWARDS

10 OCTOBER 2019 - Johannesburg, Cape Town and Durban

For more information, contact Liezel Weber - liezel@saisc.co.za





INDIVIDUALS CAN JOIN IN ONE OF TWO CATEGORIES

Professional Membership is for structural engineers, technologists, technicians, architects, quantity surveyors and project managers who are proficient in structural steel design and construction and are registered with a statutory council for the particular profession.

Associate Individual Membership is for any person who does not qualify for Professional Membership, but wants to be associated with the Institute. This includes Students.

ADVANTAGES OF BECOMING A MEMBER OF THE SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION (SAISC)

- Belonging to an organisation that is highly respected both in South Africa and outside the country's borders.
- Accessing the Institute's database and meeting the right people at SAISC events and functions.
- Promoting your organisation to clients, the professions, main contractors and others in the steel industry.
- Obtaining advice on technical, contractual or business matters from the extensive and constantly growing body of knowledge and experience concentrated at the Institute.
- Keeping up to date on new developments and opportunities in the industry.
- Saving by benefitting from member discounts on publications, courses and events.

COMPANIES CAN BECOME MEMBERS IN ANY OF THE FOLLOWING CATEGORIES

Steel Producer Membership for companies that are primary steel producers.

Steelwork Contractor Membership for fabricators and erectors of structural steelwork.

Associate Corporate Membership for companies and organisations with an interest in structural steel, including professional firms, clients of the steel construction industry, associations, companies that provide goods or services to the steel construction industry, and other companies in the broader steel industry.

Developing Membership for small, newly established steelwork contractors who need assistance.

To request a membership application form, or more information on membership fees, email Tiana Ferreira - tiana@saisc.co.za

SAISC MEMBERS WORKING FOR

THE GREATER GOOD

As part of a SAISC charitable initiative we reached out to one of our members who is actively involved in philanthropic work. For this edition of Steel Construction we speak with Adam Oldfield from Cousins Steel International (Pty) Ltd on his non-profit venture, ELEVATE.



 ${\it Email: donations@elevatebrand.org } \cdot {\it Website: www.elevatebrand.org} \cdot {\it Instagram: @elevate_brand.org} \cdot {\it Vebsite: www.elevatebrand.org} \cdot {\it Vebsite: www.elevate$

How did the concept of ELEVATE begin?

By profession I am a Structural Engineer & Director at Cousins Steel (CSI) and found that in my position I regularly come across a lot of charitable requests to the business. Individually and through CSI we help a few of South Africa's larger NGO's but all too often I wondered how those donations were being allocated.

I've always donated to a few causes but with the underlying uncertainty on distribution on those funds. On top of that I try to help honours students from UKZN in the civil engineering field, point being that I've always sought out opportunities to help others where possible.

So with a certain responsibility to give back and help those in need, I created ELEVATE.

Describe ELEVATE

ELEVATE is a SARS approved, non-profit PBO. I've partnered with SA's biggest NGOs to simplify the connection between donors, and ensure donations are properly allocated.

The concept is to ensure the trusted charities are supported whilst giving donors peace of mind.

The fundamental basis being that ELEVATE never donates money – but only delivers goods the NGOs actually need, from a list they provide.

This is agreed from day one with the partners, and ensures all donations to ELEVATE are always and only spent on required items, and never diluted into wages, needless goods, or secondary costs.

Who are the current partners of ELEVATE

We currently have eight registered partners with the end goal expected to end up at 12. Over and above the partners I have taken on a few endurance races for more specific causes.

The partners are:

- LIV Village
- CANSA Association of South Africa





- African Wildlife Vets
- Feed a Child
- CHOC Childhood Cancer Association
- Care for Wild Rhino Sanctuary,
- iCare
- Surfers Not Street Children.

All eight are well renowned organisations and I've formed great relationships with them all which reinforces the association.

You mentioned some specific causes and races, tell us more?

I completed the Cape Argus Cycle Tour on a one speed kids BMX. Those funds went towards a bike track that ELEVATE completed with Deloitte's KZN office as part of their Impact Day. ELEVATE also built a skate park next to the track.

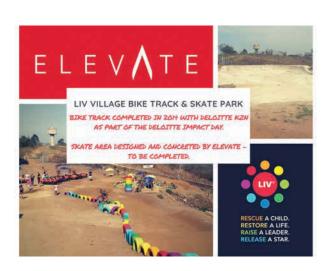
More recently I completed the Amashova Bike Race from Pietermaritzburg to Durban on an OLA ice-cream bike. Those funds went to CANSA and purchased all their branded marketing products for a year.

This June I'll be doing the Ironman 70.3 in Durban for the Care For Wild Rhino Sanctuary.

Fantastic, good luck for that. Anything else you'd like to add?

Thank you! To all the readers, I urge any companies who are not doing any CSR work to get in touch and get involved. ELEVATE can process monthly debit orders of any size and every rand helps tremendously.

These NGOs do such wonderful work on a daily basis and every contribution we make to them is met with the utmost gratitude. ELEVATE is SARS approved and issues section 18a tax deductible certificates as well so there is an added benefit to the good deed.

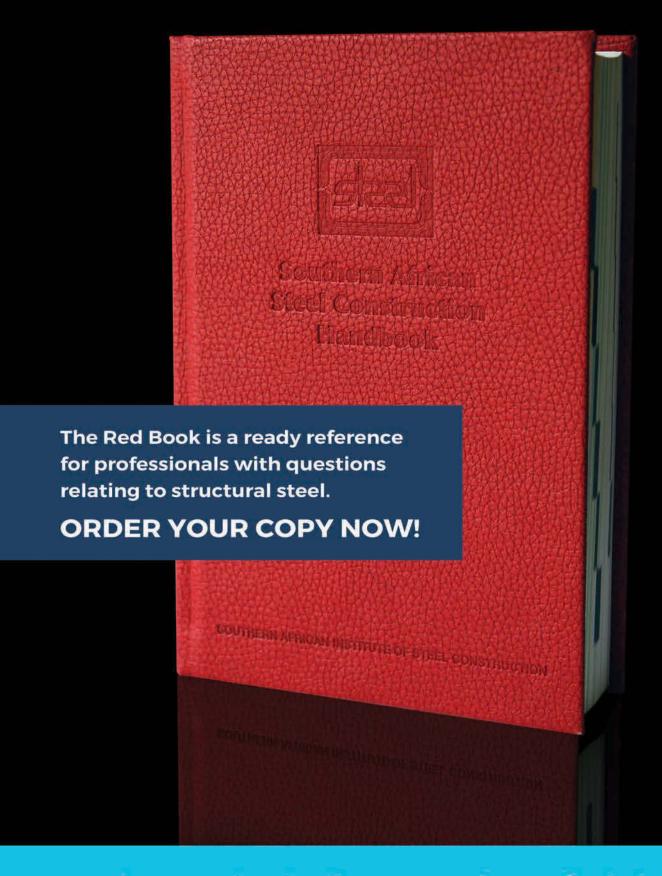








THE SOUTHERN AFRICAN STEEL CONSTRUCTION HANDBOOK



Order your Red Book online at www.saisc.co.za/book-shop or contact Debbie Allcock via email - debbie@saisc.co.za



PARAGON GIVES A HEADS-UP FOR LATEST VR, AR TECHNOLOGY IN ARCHITECTURE

The application of Virtual Reality (VR) in architecture stands to become an invaluable resource as the technology evolves to the point where multiple people can partake in the same VR session, either in the design process itself, or when used to present a building design.

This has resulted in architecture and interior architecture group Paragon promoting the use of VR headsets in order to give their clients a better understanding of design proposals, according to 3D Visualisation Manager Emile Maritz.

Both VR and Augmented Reality (AR) media have developed from mainly viewing 360° images using a smartphone in conjunction with Google Box, or similar cardboard VR





viewers, or a Samsung Gear headset, to fully interactive VR-walkthroughs and 360° video fly-throughs with a high-powered mobile workstation and a HTC Vive headset.

"Clients have reacted extremely positively," Maritz comments. VR headsets allow clients to be immersed in a virtual representation of any space in and around a building. Different elements of the design can be viewed from any angle possible.

VR/AR media can be applied to any building project type. All areas of architecture can be visualised with the help of VR, from specific design elements to furniture, building systems and material finishes, to name but a few.

A leading developer of VR headsets has even released a model that eliminates the need for a high-powered workstation, which current-generation VR headsets need in order to function. This slashes the overall production cost of VR media, and makes it possible to have VR presentations anywhere requested by clients, and not only in a pre-setup location.

"The impact of VR/AR is twofold, namely on the client's side and on the architect's side," Maritz highlights. While it allows clients to see their choices applied in relevant spaces and on buildings, architects get an overarching view of how all of the design elements interact, and can translate their ideas easily for both colleagues and clients as a result.

Maritz completed his Visual Communication Design degree (BA. Vis. Comm.) at The Openwindow School of Visual Communication in 2007, majoring in game and graphic design. He began his career at Paragon in August 2010 as a graphic designer and visualisation artist. From 2013 to late 2016, he was responsible for 3D visualisation, namely renders and fly-throughs, of all of the group's prospective building projects.

"The decision was made to grow the visualisation team, and in late 2016 I was appointed as visualisation manager. Currently I manage the visualisation team, while developing and researching new technologies in 3D media creation and visualisation workflows such as AR and VR," Maritz concludes.

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