

SAISC Steel Awards 2022: innovation, ingenuity and community

On the evening of 13 October, the Southern African Institute for Steel Construction (SAISC) hosted the 2022 Steel Awards at Emperor's Palace, Gauteng, under the 'green shoots' theme in acknowledgement of the importance of continuing to navigate through troubled times.



The Steel Awards 2022 winning project team members with Amanuel Gebremeskel, CEO of the SAISC (5th from the left).

Innovation, ingenuity and a sense of community within the steel construction industry were showcased on the evening of 13 October, when participants across the local steel value chain gathered to attend the highlight of the annual steel industry calendar – the 2022 Steel Awards, presented by the Southern African Institute for Steel Construction (SAISC) and held at Emperor's Palace, Gauteng.

This event, which demonstrates excellence in the use of steel in construction, was the first in-person Steel Awards held since 2019, prior to the COVID-19 pandemic. The 2022 Awards very effectively highlighted how the local steel sector has triumphed over adversity in the past two years; as well as showcasing a typically South African 'can-do' approach to the challenges endured during this time.

The annual SAISC Steel Awards provide an opportunity for stakeholders across the industry – including engineers, fabricators, designers, architects, processors, merchants and fabricators – to present their work and be honoured for their outstanding achievements. The evening – known in the steel sector as the 'Oscars of the steel industry' – was an elegant gala-style gathering with a 'red carpet' feel and a growth-related theme of 'green shoots'.

SAISC CEO Amanuel Gebremeskel explains: "Even before the global pandemic, South Africa's steel industry had gone through a period of severe challenges. The 'green shoots' theme is an acknowledge-

ment of the importance of continuing to navigate through troubled times. It is also a tribute to our much-loved former CEO, the late Paolo Trinchero, who did so much for South Africa's steel industry.

"He was a passionate proponent of the concept of promoting growth throughout the steel sector – or 'green shoots' as he put it – and that one must keep on moving forward and pushing through, even when times are tough. I know he would have been so proud of this year's entries, which are all the more noteworthy because they were completed during this very difficult pandemic era.

"A number of high-quality, truly excellent projects have been showcased at this year's annual Steel Awards, and I believe this is a testimony to our character as a nation as well as the value that the SAISC brings to the local steel construction industry. The SAISC is one of only six steel institutes around the world, and has a long history as a 'steel sector sage': a custodian of technical knowledge, an educational resource and a trusted authority," says Gebremeskel.

Benguela General Treatment Plant mining facility

While there was tremendous merit across all the entrants, as well as all the category winners, the SAISC Annual Awards judges were unanimous in their praise of the overall winner, which was also the winner of the Mining category: the Benguela General Treatment Plant mining facility, which sits aboard the world's most advanced diamond

recovery vessel, the Benguela Gem.

The Benguela Gem is owned by Debmarine Namibia, a 50/50 joint venture between De Beers Group and the government of the Republic of Namibia.

A product of international collaboration, the ship was designed in Norway and Poland, built in Romania and fitted out by De Beers Marine South Africa. Diamond recovery by Debmarine Namibia takes place at 90 to 150 m below sea level. The exceptional design, fabrication and installation of the 3 000 t diamond treatment plant on the vessel was carried out ahead of schedule by local engineers and fabricators in the midst of COVID-19 pandemic restrictions.

Gebremeskel adds: "This project stood out in a number of different ways, and presented a first in the history of the Steel Awards: it operates off-shore and is floating rather than being stationary and anchored, making it a truly distinctive applicant within the Awards categories. As a sea-faring structure, it is also subject to unusual engineering loads from a naval engineering perspective."

The vessel, built for De Beers Marine operations, is unique in Africa, being able to carry out the entire under-sea diamond dredging and treatment process. From the vessel arriving at the end of September 2021 with an empty deck, it sailed again in December 2021 with a fully operational mine onboard.

"This project was an exceptional showcase of the use and applications of steel

featuring South African design, fabrication and construction for an international client,"

The treatment plant was nominated by designers PBA Projects and completed in collaboration with De Beers Marine and 3C Metal Belmet, Namibia and local fabricators Steel Services and Allied Industries.

Other Steel Awards Category winners are:

- Automotive, Ford Package E: As part of a R3-billion investment by vehicle manufacturer Ford, an automotive assembly plant was erected in Rosslyn, Pretoria as part of the company's high-volume export programme. The project used extensive steel supplies and comprises a 12 400 m² warehouse, 14,6 m in height. It was completed ahead of schedule, despite the COVID-19 pandemic and supply challenges.
- Agri-Industrial, Woodridge Packhouse: This project presents an interesting form, clever use of natural light and a design that allows for natural ventilation, therefore saving on energy costs.
- Residential, House Vingos: The innovative use of steel combined with all the other elements of construction delivers a statement piece of architecture and a warm, welcoming family home.

Sports Facilities plus Metal Cladding and Roofing, KES Aquatic Centre: While retaining the heritage component of the previous swimming pool complex, the roof structure is of particular interest. An apex running diagonally across the structure, requiring meticulous attention to ensure leakproof sealing. Sculptural/Architectural, Eastgate

Solar Trees: In addition to their aesthetically-pleasing design and how this cleverly reflects a renewable energy focus, access to the site during the construction phase was challenging, making for a complicated and challenging installation process.

Light Steel Frame (LSF) Building, Jubilee Hospital: At the height of the COVID-19 pandemic, the innovative use of light steel framing in this field hospital in Hammanskraal, north of Pretoria, allowed for the addition of a significant number of hospital beds to increase existing capacity.

Tubular Steel, Babanango Travellers Camp: This innovative tourist accommodation is situated within the Babanango game reserve in northern KwaZulu-Natal. A number of interesting technical details included reconciling complex issues regarding the use of different materials of construction and geometrical factors to achieve the project's architectural objective: roofing reflecting shapes used in traditional African shields.

Community Enrichment, Gary Kirsten Sports Centre Khayelitsha: Featuring ease of construction and sustainable materials, this structure also has the capacity to be extended if need be.

Regional Awards winners included House Vingos (Gauteng); Benguela Gem Treatment Plant (Western Cape); Woodridge Packhouse (Eastern Cape); Freshmark Polokwane (Limpopo) and Babanango Travellers Camp (KwaZulu-Natal).

The Best Export Project award went to the New Biox Plant in Zimbabwe, which adopts an optimal recovery process for high

sulphur gold ore. This technically challenging structural framing project entailed detailing, fabricating and constructing a gold processing Biox plant that provided good access to various areas of the Biox plant and to its piping support system.

"In contrast to our Awards of 2020, which of necessity took place purely online and our Awards of 2019, which were held across three venues simultaneously, the 2022 Steel Awards were planned from inception to take place at a single venue. This was to highlight the event's in-person networking opportunities and to emphasise the value that the constructive use of steel brings to communities and lives," adds Denise Sherman, the Marketing and Management Consultant for SAISC.

"We are extremely grateful to our sponsors, who made the event possible through their generous sponsorships: Safal Steel, Bolt and Engineering, BSi Steel, ProRoof, NJR Steel, Macsteel, Safintra South Africa, Global Roofing Solutions, Unica Iron and Steel, ASTPM, and Stewarts & Lloyds," says Gebremeskel.

"It is wonderful to have been able to host the Steel Awards in-person once again, and to see the spirit of triumph over adversity soaring high throughout the local steel and construction industries. I believe the Institute, together with our valued Steel Awards entrants, sponsors, members and partners, has proven once again how much can be achieved across the local steel value chain when all players persevere for the continued success and sustainability of the steel industry," he concludes. □



Steel Awards 2022 overall winner - the Benguela General Treatment Plant mining facility, aboard the 'Benguela Gem' the world's most advanced diamond recovery vessel (aerial view).