steel CONSTRUCTION

Volume 35 No. 1 2011 Cover Price R15.00

IN THIS ISSUE:

Architectural Steel

SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

OFFICIAL JOURNAL OF THE SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

EDITOR'S NOTE

As soon as a new year starts, new trends are 'prophesied' by the media and experts from world economics (boy, do they get that wrong sometimes) and politics to the trendiest couch cushion to buy.

In the November 2010 Issue I talked about 'setting a trend – changing the way people think'. For this Issue I looked at what the focus for 2011 will be and the whole 'green' issue really interested me.

Just an example - the Green trend

Everybody is going green this year – ho hum. Everything is green according to the marketing fraternity. For example: Email is greener than paper, but do email prophets think about the almost zero recyclability of computers / cell phones etc. and the huge amount of electricity (usually from non-renewable power sources) that drive email based communication. And the paper prophets are claiming paper (sourced from responsible foresting) is still the most sustainable, recyclable source of communication, but what about the process of making the paper in terms of emmissions, electricity and printing processes, transporting it from the source to the plant to the users? I think the green police are going to start cracking down on these wild marketing statements and actually look at the holistic practice of producing a responsible sustainable product.

The steel and construction industry is not without its own contradictions and complexities in terms of the 'green' issue. More and more clients are demanding sustainable construction methods – have we fully understood what these methods are? The one fact is clear and has been for centuries, even before the word 'green' meant more than the name of a colour – steel can be re-used and 100% recycled over and over again.

It will be interesting to see what the year 2011 brings for the global village, South Africa, the steel construction industry and our Institute.

steel CONSTRUCTION

Volume 35 No. 1 2011

Contents

The Steel Construction journal supports the freedom of media and speech implicitly enshrined in our Constitution (Article 16).

OFFICIAL JOURNAL OF THE SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION

Front Cover
Australian Pavilion, Shanghai

Photo: Peter Bennetts Photography

PUBLISHED BY
Southern African Institute of Steel Construction
1st Floor, Block C
43 Empire Road, Parktown West
P O Box 291724, Melville 2109
Tel +27 11 726 6111
Fax +27 11 482 9644
E-mail: info@saisc.co.za
Web site: www.saisc.co.za

EDITOR
Reneé Pretorius
renee@saisc.co.za

ART DIRECTOR
Sandra Addinall
Tel +27 11 868 3408
Fax +27 11 900 1922
E-mail: cbtdesign@adcot.co.za

REPRO & PRINT
Camera Press
Tel +27 11 334 3815

ADVERTISING
Viv van Zyl
Tel +27 16 349 6839
Cell 082 492 8603
Fax 086 647 2788
E-mail: viv@lantic.net

SOUTHERN AFRICAN INSTITUTE OF STEEL CONSTRUCTION (SAISC)
Executive Director
Dr Hennie de Clercq, PrEng.
hennie@saisc.co.za

Education Director
Spencer Erling, PrEng.
spencer@saisc.co.za

ISF Director
Neels van Niekerk
neels@isf.co.za

SASFA Director
John Barnard
john.barnard@saol.com

CHANGES TO THE MAILING LIST:
Please notify us of any changes to the mailing list.
Tel.: +27 11 726 6111

SUBSCRIPTIONS:
To take out a subscription please telephone +27 11 726 6111

ANNUAL SUBSCRIPTION:
R100.00 South Africa
R200.00 Other countries
Prices include VAT, packaging and postage.

INDUSTRY NEWS IN BRIEF

HATCH AFRICA EXCEEDS FORECAST ESTIMATE IN R2.5 BILLION PROJECT

Leading EPCM firm, Hatch Africa looks set to complete its role in one of Anglo American's major expansion projects earlier than scheduled, and below budget. The Sishen South project to establish the new Kolomela iron ore mine south of Postmasburg in the Northern Cape will increase export capacity at local subsidiary Kumba Iron Ore by about 9Mtpa.

Hatch Africa has proven to be a valuable resource to the R8.5-billion Sishen South project, after successfully implementing a global work-share EPCM strategy that has seen the company's R2.5 billion role in the megaproject remain ahead of schedule and under-budget.

Hatch Africa project manager for the Sishen South Plant and Stockyard portion of the project, Floyd Botha, notes that the company's role in the project – which includes design, engineering, procurement, construction management, and project management at the site in the Northern Cape – will be just under 90% complete by the end of 2010.

"Our scope of work is the plant and stockyard area, which was originally estimated to be worth about R2.8 billion; however, savings in construction and favourable escalation has resulted in that figure being reduced. The engineering and procurement aspects of the project are already complete, while construction work stood at around 80% completion in September 2010, with a small amount of civil works still to be carried out" explains Botha.

Renexcon aerial view.

Botha points out that Hatch Africa's responsibility in the plant starts at the primary crusher feed-point and runs through the entire plant – including primary, secondary and tertiary crushing of material with scalping, and product screening in between – through to stacking and reclaiming in the stockyard, into the load out station and finally into the rail chase.

To date, the project has included: pouring 30 000m³ of concrete; 1 450 tons of plate work; 1 300 tons of structural steel; 1 100 tons of conveyors; 335 mechanical equipment items, 205km of electric and instrument cables and 26km of piping.

Botha believes that a key to the success of the project has been with Hatch Africa's ability to integrate with Kumba. He says: "Many businesses are reluctant to integrate with the client, as they believe that it may cause animosity, due to interference. However, we have managed to work in synergy through-out the project, and the decision to integrate has proven to be a highly successful one."

What's more, Botha notes that Hatch Africa boasts a proud safety record - achieving a total of 2.75 million work-hours without a lost-time injury with its on-site workforce of around 1 200. "This is an exceptional achievement, which has significantly contributed towards moving the project ahead of schedule, owing to the fact that we have not suffered any major downtime," he continues. Botha notes that the project is now expected to be ready for handover to Kumba in June 2011.

LOCAL STEEL COMPANY PART OF R3 BILLION INVESTMENT IN ROSSLYN WAREHOUSE

As part of a R3 billion investment by Ford, and forming part of a high volume export programme, the construction of an Automotive Supplier Plant is currently being erected in Rosslyn, Pretoria. This mammoth project was awarded to

main contractor Renexcon by an international investor into South Africa who owns 96 factories worldwide and employs 32 000 people.

B&T Steel was contracted to design, fabricate and erect this project's structural steelwork comprising a 12 400m^2 warehouse, 14.6m in height on a 29 000m^2 property.

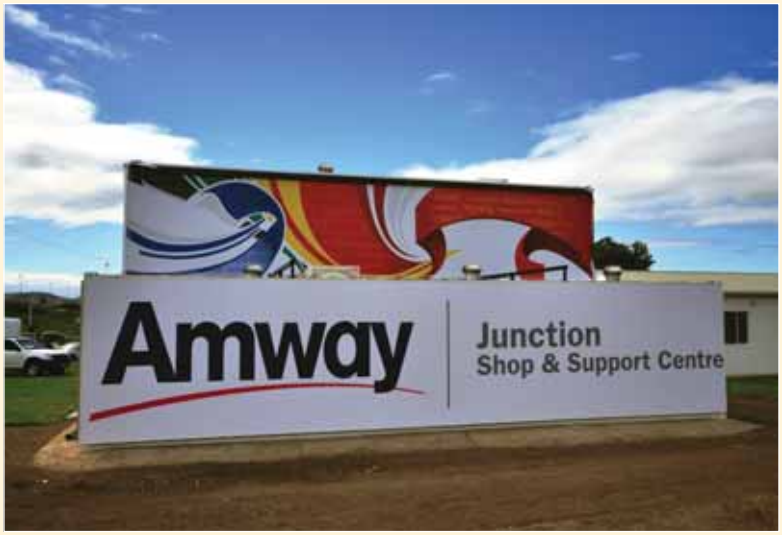
The factory houses 14 state-of-the-art machines ranging from 2.5 tons to 32 tons, forming the manufacturing process for the automotive parts. There is also a 40/5 ton overhead crane. Henk Swanepoel, project manager says, "We were extremely pleased that B&T was the contractor of choice, as their dedicated team worked closely with us on the design, fabrication and erection. They were aware of the time constraints on the project. A project of this size should take up to eight months to complete, and although we had to excavate 12 600m^3 of clay and import 23 000m^3 of compaction material, we will be able to complete the project in five months – ahead of schedule. The earthworks alone took two months and the construction, with the help of the dedicated team from B&T Steel, will only take three months."

One of the major benefits of this project will be to ensure knowledge transfer, skills development, growth and sustainable business. It will also create 145 local jobs." concludes Swanepoel.

ONEPOINTZERO ROLLS OUT AMWAY SPAZA SHOPS

JP Beukes, owner and founder of award-winning interior architectural practice Onepointzero, is currently busy with the planning and implementation of a concept that is hip, fresh and urban. He has been hard at work designing so-called spaza shops (a small informal shop in a township, often run from a private house) for Amway right here in South Africa.

With one of these spaza shops already up and running in Kwa-Mashu (KwaZulu Natal), more and more of these shops are expected to be erected all over the country – carefully thought out and skillfully designed by JP and the Onepointzero team.



The spaza shop was constructed using a shipping container with a steel structure support.

DTI'S INCENTIVE PROGRAMME

Many steelwork contractor companies have invested meaningfully in the steel construction industry during the past few years. The DTI has now announced an Industrial Project Incentive to provide tax relief for both new greenfield and new brownfield investments.

It only applies to manufacturing assets to be acquired or contracted for on or after date of approval.

Steelwork contractors may still be able to claim the benefits for their expansion plans or their clients/investors could apply for these benefits which are substantial:

- R900 million in the case of any greenfield project with a preferred status;
- R550 million in the case of any other greenfield project;
- R550 million in the case of any brownfield project with a preferred status;
- R350 million in the case of any other brownfield project;
- An additional training allowance of R36 000 per employee may be deducted from taxable income; and a maximum total additional training allowance per project, amounting to R20 million, in the case of a qualifying project, and R30 million in the case of a preferred project.

SEIFSA sent out a circular which can be found on www.seifsa.co.za giving an outline as well as a reference to www.dti.gov.za where more details and application forms can be obtained.

According to the point system, an Industrial Policy project will achieve 'qualifying status' if it achieves at least

INDUSTRY NEWS

five of the total 10 points, and a 'preferred status' if it achieves at least eight of the total 10 points.

A copy of the IPP 12-I (Industrial Policy Projects) scheme details as well as an outline of the Point System can be obtained from the SAISC. Our industry and its products are part of schedule 35 – 354 and 355, a prerequisite for participation.

The Points are scored for Innovation (1), Improved energy efficiency (2), Business Linkages (1), SMME Procurement (1), Direct employment creation (2), Skills development (2) and location (1) – many of which you already qualify for.

Please do not hesitate to contact Kobus de Beer (kobus@saisc.co.za) at the SAISC for more information.

PROCUREMENT DOCUMENTATION GUIDELINES FOR CONSTRUCTION WORKS BASED ON THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD (CIDB) REGULATIONS

The Standard for Uniformity in Construction Procurement was first published in terms of the CIDB Act, 2000 (Act No 38 of 2000) in June 2004 with further amendments, the latest amendment being May 2010.

Uniformity in construction procurement documentation, procedures and practices is essential to improve industry performance and improve value to employers. The abovementioned Standard for Uniformity in Construction Procurement engenders a culture of consistency and predictability within the procurement process which aims at bringing about standardisation and uniformity in construction procurement documentation, practices and procedures.

NASCC 2009.

Definition of construction procurement means procurement in the construction industry, including the invitation, award and management of contracts.

To comply with the CIDB Standard for Uniformity in Construction Procurement the Association of South African Quantity Surveyors (ASAQS) has formatted and compiled the following set of procurement documents based on the JBCC Series 2000 Principal Building Agreement (Edition 5.0 (reprint 1) of July 2007 for the exclusive use of its member practices:

- PBA Master Procurement Documents – August 2010
- PBA Preliminaries - Master – August 2010 in WinQS format
- ASAQS Preliminaries – August 2010

The PBA Master Procurement Documents have been formatted so that the compiler or user of the document only needs to follow the instructions in red italics to either insert required particulars in items, amend information, delete items or information, or describe particulars, etc to suit each particular circumstance.

NASCC: THE STEEL CONFERENCE

(May 11-13 in Pittsburgh)

The Steel Conference offers more than 90 technical sessions and is the premier educational event for structural engineers, fabricators, erectors, and detailers. In addition to practical seminars on the latest design concepts and construction techniques, the Conference offers an extensive trade show (featuring products ranging from structural software to machinery for cutting steel beams) and plentiful networking opportunities.

It's a once-a-year opportunity to learn the latest techniques, see the most innovative products, and network with your international peers and clients. And one low registration fee gains you admittance to technical sessions, keynote address, the T.R. Higgins Lecture, and the exhibition hall.

Conference attendees can learn from leaders in the design and construction industry, such as Lawrence Griffis from Walter P Moore and Duane Miller from The Lincoln Electric Company.

See www.aisc.org for more information.

Dr Celeste Barnardo (Stellenbosch), Tessa Townshend (UCT) with Richard Walls (New Gen 2009 participant).

NEW GENERATION PROGRAMME

The full day New Generation programme included a visit to the extensive workshop of DSE in Vanderbijlpark, followed by a bit of an adrenalin rush getting up the cat ladders and into the roof structure at the FNB Stadium (or Soccer City as it was known during the World Cup).

The New Generation initiative was started in 2008 to serve as a special incentive and inspiration for the high level of work done at our universities both by lecturers and top senior and postgraduate students. In 2010 the programme was made possible by an equal contribution from every one of our Steel Awards sponsors and also by R25 from the attendance fee of every guest to Steel Awards 2010.

This enabled us to welcome 15 participants representing six top South African universities on an all-expenses paid full day programme in Gauteng with the aim of exposing them to special aspects of the steel construction industry and creating a networking opportunity with major role players in our industry. In addition, we could also accommodate 11 more top candidates as guests to the Steel Awards Dinner (only) at the venue closest to them, i.e. in Johannesburg, Durban or Cape Town.

The full day programme included a visit to the extensive workshop of DSE in Vanderbijlpark, followed by a bit of an adrenalin rush getting up the cat ladders and into the roof structure at the FNB Stadium (or Soccer City as it

Students enjoying themselves at Steel Awards 2011.

Students were seated amongst other VIP and sponsors to allow them to get to know the industry.

was known during the World Cup). We are grateful for the expert technical guidance within the structure, provided by Albert Hafkamp and Gary Jones of DSE. Viv van Zyl and Chris Greensmith did excellent work as the SAISC hosts, making sure we ended with the same head-count of top performers that we started with.

This programme has financial implications and involves rather complex logistics for the organisers and also for the participants as it falls within their respective academic schedules. It is therefore crucial to establish whether participants found it sensible or a waste of time.

These were some of the post event comments from participants:

Tessa Townsend (UCT, MSc (Eng) Structural and Engineering – vibration serviceability of footbridges):
Wow, what a fantastic experience. It is a brilliant way to get people interested in steel.

Kenneth Mensah (University of Stellenbosch, MSc Eng (Civil) – structural reliability)
It is an excellent programme for students that are often unaware of design and construction trends. It shapes the young mind to appreciate what is being done.

Jodi Treurnich (University of Pretoria, BEng Civil Engineering)
It was awesome; no improvements need to be made. Thank you for a wonderful experience

These were the participants, whose names may yet be heard in this industry in the future:

University of Cape Town: Tessa Townshend and Christian Mutombo (both MScEng Civil; Prof Pilate Moyo, Dr Sebastian Skatulla and Daniel Coulson (BSc Eng Civil, 3rd year) were invited to the dinner in Cape Town.

University of Stellenbosch: Dr Celeste Barnardo (mentor), Du Toit Oosthuizen and Kenneth Mensah (both MScEng Civil); Invited to dinner in Cape Town: Chandre Brewis and Heinrich Albertyn (both MScEng Civil)

University of Kwa-Zulu Natal: Prof Sekhar Chakrabarti (mentor), Christopher Maine and Justin Pringle (both BScEng Civil, 4th year); Invited to dinner in Durban: Nilohsen Moodley and Matthew Murphy (both BScEng Civil, 4th year), also Chris Adonis of Durban University of Technology.

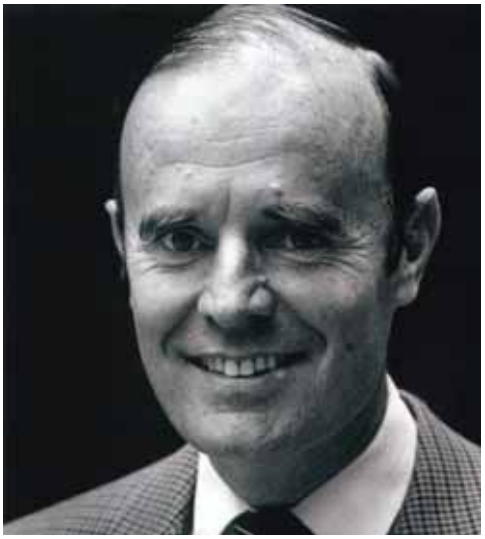
University of Witwatersrand: Attending the dinner in Gauteng: Jason Bluff and Shakir Essop (both BScEng Civil, 4th year)

University of Johannesburg: Dr Morgan Dundu (mentor); Gina Faccio and Marcus Gonelli (both BEng 3rd year); Attending dinner: Marcel Strydom and Jean Joubert (both BEng, 3rd year)

University of Pretoria: Prof Chris Roth (mentor); Jodi Treurnich and Hendrik Steenkamp (both BEng Civil, 4th year); Attending dinner: Letisha Rorke and Rene Bosman (also BEng, Civil, 4th year)

In addition to positive feedback, we noticed that a few New Generation participants of previous years attended Steel Awards as 'standard' guests, as they have since indeed become part of this industry. Although the programme could not take all the credit for that, it does serve as some form of endorsement to continue this incentive for the 'new generation' of the structural steel (and broader engineering) industry. The challenge remains to keep the content meaningful and exciting within a sensible cost structure.

The SAISC congratulates and thanks all the mentors and top performers who participated in New Generation 2010. We look forward to running the programme again in 2011.



OBITUARY

PROFESSOR ALAN KEMP

By Dr Hennie de Clercq,
Executive Director, SAISC

But Alan Kemp was more than just a top flight academic. He was in the first instance a solid and reliable person with a wealth of experience and great insight into a range of topics and issues. He was a highly principled person and an able leader who achieved much in his lifetime. And he was kind and full of humour and warmth.

There are many ways to excel in steel construction. You can handle some project so that everybody is highly pleased at the end; you can be a top flight boilermaker, or design engineer, or manager, or any of a number of other things. Well, Alan Kemp was a top flight academic. These are the bright people who develop theories, who test and calculate to find out how structures actually behave, who develop a deep understanding of steel structures and make the rules that govern us in delivering safe but economic structures. And of course, they teach young people who come into the industry and do the work and take the industry to ever higher levels. We cannot put a value to what good academics mean for our industry.

But Alan Kemp was more than just a top flight academic. He was in the first instance a solid and reliable person with a wealth of experience and great insight into a range of topics and issues. He was a highly principled person and an able leader who achieved much in his lifetime. And he was kind and full of humour and warmth.

It is that combination of exceptionalism and down-to-earthness that caused us all to respect and love him. And not only South Africans were impressed with Alan. This is what Professor David Nethercot, Head of the Department of Civil and Environmental Engineering at Imperial College, London, past president of the Institution of Structural Engineers in London, and former council member of the Royal Academy of Engineering says about undertaking a journey with Alan: *"Alan, ever the gentleman, professional and enthusiast, was a delightful companion, always ready for a technical discussion and eager to swap views and opinions. From this an enduring friendship was born."*

The highly respected Prof Geoff Kulak of the University of Alberta says: *"Alan was highly respected outside of Southern Africa for his contributions to many aspects of structural steel."*

And Prof Nick Dekker of the University of Pretoria: *"All I can say is that Alan set the absolute benchmark for an academic, a professional and a gentleman. Period."*

And Prof Robert Driver of the University of Alberta, after a trip with Alan and Carla: *"I cannot begin to describe the impact this brief period of time with the Kemps had on me."*

A short life history of Prof Kemp reads as follows:

Alan Kemp spent much of his life at the University of the Witwatersrand, where he obtained a BSc and MSc and was awarded the Chamber of Mines Gold Medal as the best engineering student. Then he went to Cambridge where he received a PhD.

Dr Hennie de Clercq (Executive Director SAISC), Prof. Robert Driver and Prof. Alan Kemp (Wits).

His first employer was Dorman Long (Africa) Ltd where he was involved in numerous intricate projects. He played a pivotal role in solving the immensely complex engineering problems associated with the steel bridges of the Heidelberg Interchange on the M2 in Johannesburg. He was soon appointed manufacturing manager of Dorman Long's Railway Rolling Stock Division, managing two large factories with 4 000 people.

Despite his success he opted to join his alma mater again in 1976, filling the Chair of Structural Engineering, which he occupied until his retirement in 2003. He went on to fill a variety of managerial positions at Wits: Head of the Department of Civil Engineering, Dean of Graduate Studies, Dean of the Faculty of Engineering, Senate Member of Council, Deputy Vice-Chancellor and Vice-Principal.

Prof Kemp formulated a programme of postgraduate courses leading to the Graduate Diploma in Engineering, the MSc (Eng) and the MEng and he also supervised many MSc and PhD students. He was recognised as one of the leading researchers in engineering, wrote a large number of scientific papers and was a sought after speaker at conferences. He was instrumental in setting up the Division of Continuing Engineering Education at Wits. The university honoured him in 2007 with an honorary doctorate for his exceptional service to higher education, research and the practice of engineering.

With respect to both undergraduate and postgraduate teaching as well as in continuing engineering education, Prof Kemp was an innovative and dedicated but demanding teacher, both in the classroom and in supervising research students. He was prominent in programmes to increase the participation and success rate of black engineering students and he chaired the original Committee on Academic Support in the Faculty of Engineering.

Kemp served on the Council and the Executive Committee of the South African Institution of Civil Engineering and was elected President of the Institution in 1991. He served on and chaired several committees of the South African Bureau of Standards concerned with formulating and writing codes of practice for the design of steel structures and was Chairman of the important Loading Code Committee for 15 years. The profession honoured him by electing him an Honorary Fellow of the South African Institution of Civil Engineering and an Honorary Life Member of the Southern African Institute of Steel Construction.

In terms of international recognition he is a member of the Research Committee of the Institution of Structural Engineers, London, and member of the Steering Committee for the US Engineering Foundation Conferences on Composite Construction.

Despite all his achievements Prof Alan Kemp will be remembered in the first instance as a kind, considerate and deeply principled man. He leaves his wife Carla and two daughters with their families.

CALENDAR OF EVENTS

PRACTICAL ESTIMATING COURSE FOR STRUCTURAL STEEL MANAGEMENT
Every Monday starting 21 February – 27 June 2011
For more info contact spencer@saisc.co.za

BASICS OF STRUCTURAL STEEL COURSE
9 February 2011
Protea Hotel OR Tambo

SAISC BREAKFAST TALK – UNIDO BENCHMARKING PROGRESS REPORT
3 March 2011

ISCG NEW ZEALAND VISIT
28 March – 3 April 2011

DEADLINE FOR STEEL AWARDS 2011 ENTRIES
6 May 2011
Contact Reneé Pretorius at 011 726 6111 or renee@saisc.co.za

KALTENBACH IPS VISIT
9 – 13 May 2011
Switzerland
For more info contact spencer@saisc.co.za

SAISC GOLF DAY 2011 (GAUTENG)
11 May 2011
Houghton Golf Club

NASCC: THE STEEL CONFERENCE
11- 14 May 2011
Pittsburgh, Pennsylvania, United States
http://www.aisc.org/eventdetail.aspx?id=16024

10TH INTERNATIONAL CONFERENCE ON STEEL, SPACE AND COMPOSITE STRUCTURES (SS11)
18-20 May, 2011,
North Cyprus, Turkey

THE CANADIAN INSTITUTE OF MINING, METALLURGY AND PETROLEUM'S 2011 CONFERENCE & EXHIBITION
22 – 25 May 2011
Montreal, Quebec
www.cim.org/montreal2011

EUROSTEEL 2011
31 August – 3 September 2011
Budapest, Hungary
www.eurosteel2011.com

STEEL AWARDS 2011
15 September 2011
Gauteng: Emperors Palace, Kempton Park
Durban: TBA
Cape Town: TBA

FOR MORE INFORMATION ON EVENTS VISIT OUR WEBSITE – www.saisc.co.za

John Barnard, SASFA director.

LIGHT STEEL FRAME BUILDING INTO 2011

By John Barnard, SASFA director

In order to support its members, and facilitate development of the LSFB industry, SASFA has identified key focus areas for its activities during the coming year. As was the case during 2010, training is again high on SASFA's list of priorities.

After the recent slump in activity in the building industry, there are signs of improvement especially in the residential market. According to Stats SA, the floor area of all buildings completed during 2010 in RSA was 40% lower than in 2007. Residential buildings suffered the most, with a decline of 47%!

However, based on building plans passed, the decline in residential building activity has bottomed out, and that activity should start increasing during 2011. This is also reflected in a SASFA survey of expectations of the manufacturers of light steel framing. After the doldrums of the past two years, it is refreshing to note the optimism with which the industry is viewing the coming year. In fact, some manufacturers already had such full order books, that they could not even close down over the past festive period!

This could be due to the growing acceptance of light steel frame building as a viable, energy efficient, alternative building method, on the back of growth in demand for new buildings.

In order to support its members, and facilitate development of the LSFB industry, SASFA has identified key focus areas for its activities during the coming year. As was the case during 2010, training is again high on SASFA's list of priorities.

Three courses are planned

- Six day course for building contractors and developers,
- Full day course on the SANS 517 code (CPD accredited) aimed at designers, developers and building contractors, and
- Half-day course for building inspectors, supervisors and foremen.

These courses will be offered in the major centres, provided sufficient demand can be identified.

SASFA will again present lectures to architecture, engineering and building science students at the major South African universities.

The Technical Committee will investigate the feasibility of new technical developments in the LSFB industry worldwide be and implement them if proven advantageous for the South African market. SASFA will distribute the relevant

Light Frame Homes (Cape Town) supplied and cladded the light steel frames of the Novo warehouse.

SOUTHERN AFRICAN LIGHT STEEL FRAME BUILDING ASSOCIATION

Cladding of the Novo warehouse in Paarl.

reports to members. A series of tests are planned to validate and optimise the wall, roof and floor assemblies covered in SANS 517:2009, and SASFA will strive to expand its library of articles and books relevant to the light steel industry.

Roll out of the SASFA Accreditation Programme will continue, with the initial focus on manufacturers of light steel framing. SASFA initiated this phase during 2010 by presenting a short training course on quality management systems to manufacturers. SASFA Manufacturing members will be requested to apply for accreditation assessment, after which an independent assessor will be appointed to carry out the assessments.

Developers and home owners are urged to ensure that they appoint competent LSF builders and suppliers for their projects, and that work is carried out to comply with SANS 517:2009 Light Steel Frame Building.

SASFA will continue to act as the 'quality custodian' of the industry, and will investigate projects involving its members when requested to do so, with the aim to facilitate remedial action and successful completion of the projects.

Judging by reports of current projects and those on the drawing board – including retirement villages and luxury residential estates – 2011 promises to be an exceptional year for light steel frame building!

Visit www.sasfa.co.za for more information.

AUSTRALIAN PAVILION, SHANGHAI

First appeared in Steel Profile, August 2010

Words: Rachael Bernstone
Photography: Peter Bennetts Photographer

The complex curves of the Australian Pavilion at Shanghai World Expo 2010 were simple to construct, thanks to a new panelised cassette system that makes building with weathering steel easy.

Photo: Peter Bennetts Photography.

As the architects responsible for the Geelong Ring Road and the Australian Centre for Contemporary Art (ACCA) on Melbourne's Southbank, the team at Wood Marsh has amassed significant expertise in the design and delivery of weathering steel structures. Their latest offering – the Australian Pavilion at Shanghai World Expo 2010 – has benefitted from recent innovations in technology in multiple ways.

By installing BlueScope Facade Solutions Azure™ panels made from AS/NZS 1597 - XLERPLATE® weathered steel that were customised to the architect's specifications, the design and construction team hastened the building process and achieved a level of precision that was not previously possible, according to Wood Marsh project architect Antony Martin.

For the Australian Pavilion commission, which Wood Marsh won in an open competition in partnership with creative design firm Think!OTS, Wood Marsh aimed to represent Australia's Red Centre in an abstracted and sculptural way – especially Uluru and Kata Tjuta – to evoke images of the landscape that most international visitors readily associate with Australia.

"When ACCA was completed, people remarked that although angular in form, it evoked the Red Centre, so it became the reference point for our design concept

Photo: Peter Bennetts Photography.

for the Australian Pavilion," he explains. "It was important for the pavilion to be both uniquely Australian and an excellent piece of design."

"Weathered steel was always central to that design idea," Martin adds, "because the nature of the material relates to the patina and ochres associated with the Red Centre."

Since Wood Marsh completed ACCA in 2002, and construction of the Geelong Ring Road began in 2006, the launch of BlueScope Facade Solutions' Azure™ panels has simplified the installation of AS/NZS 1597 - XLERPLATE® weathered steel, providing a one-stop-shop for design, fabrication and construction solutions.

"We had initially considered using a custom panel system that would have been designed specifically for this project," Martin says, "but then we were approached by BlueScope Facade Solutions in December 2008.

"As sponsors of the Australian Pavilion, BlueScope Steel was familiar with our winning scheme, and they became involved with the facade design, supply and installation at an early stage of the process," he explains. "I travelled to Sydney with client representatives to see the Penrith Government Office Building in construction and, based on what we saw there, I made certain requests in relation to panel size and joint specifications – and Facade Solutions was able to produce panels that fulfilled our requirements."

According to Martin, the new cassette panels offer several key advantages over earlier weathering steel cladding systems. "The most significant difference in the construction methods employed was that, at ACCA, the weathered steel formed the weatherproof skin of the building, whereas at the Australian Pavilion, it acts as a rain screen," he says.

The panelised system enabled the pavilion to be built in China by local workers employed by the head contractor, Bovis Lend Lease Projects Shanghai, using a combination of locally sourced structural steel and BlueScope Facades AzureTM panels.

"The crew that installed the facade was excellent," Martin says. "Once they mastered the sequence of the installation, they were able to move very quickly around the building, and it took just two months to complete the cladding."

The speed and ease of construction were important considerations in the specification of Azure™ panels, given the tight timeframe leading up to the official opening date on 1 May 2010. In addition, the simple task of removing the panels will ensure a smooth disassembly when Expo concludes in October.

"All the facade panels can be simply removed and reinstalled, regardless of the form or shape of a subsequent building," Martin says. "It's very easy to unpack the panels, and we kept the packaging, so that they can be shipped back to Australia for reuse afterwards."

However, there was another even more compelling argument for specifying the Azure™ panels, according to the architect. "The ability to ensure minimum tolerances and precise alignment in the panels was the most important factor," Martin explains. "It meant we were able to achieve minimal horizontal seams and therefore convey the monolithic appearance we desired."

The building owes its sinuous curved walls and undulating roofline to the flawless precision of cassette system. "All of the 'tube' penetrations were cut on-site from templates, but the parapet panels were cut to size in Australia," Martin explains. "You can see the precision that we were able to achieve through the smooth and curving parapet line. The fact that the panels were all prepared in Australia so that the workers could assemble them without delay was outstanding."

Martin says that construction on-site proceeded free of unexpected challenges because the design and construction team had undertaken rigorous preparation and testing beforehand. The complex structure was designed in Melbourne using a combination of CAD and Rhino, with comprehensive shop drawings produced in China using TEKLA 3D modelling software. "The primary structural frame was enormously complex given the plan, and the fact that you have a central theatre which is wrapped with circulation and exhibition spaces," Martin says.

"We were running to a very tight time frame – the building had to be built in just 12 months, and we had a non-negotiable completion date – so we had to be certain of everything in advance.

"We had a prototype produced of the facade system, which I inspected several times in Sydney before it was shipped to China, so that the local workers could see how it would all come together,"

Photo: Peter Bennetts Photography.

he says. “As it took shape, we were impressed by the precision and progress of the Chinese construction crew.

“We did everything in our power to avoid running into difficulties on site,” Martin adds. “In addition, Bovis Lend Lease established a quality control program to sign off on key stages of the construction, and I visited Shanghai as part of that process every four to six weeks during the installation, to inspect the progress.”

Now that the building is open to visitors, it has taken on a life of its own, with streams of people moving through the pavilion each day. A constant flurry of visitors activates the spaces in and around the building, and the facade is anything but dull and boring.
“One of the most important things about weathering steel is that it develops a patina that will change over the course of the Expo,” Martin says, “so the building is not necessarily a static object: its colours will change over time, depending on the prevailing weather, and by changing sunlight throughout the course of the day.

project team

Project name

Australian Pavilion, Shanghai World Expo 2010

Client

Department of Trade and Foreign Affairs

Architect

Wood Marsh Architecture

Design Directors

Roger Wood and Randal Marsh

Project Architect

Antony Martin

Builder

Bovis Lend Lease Projects Shanghai

Structural Engineers

Bovis Lend Lease Technical Services Group

Completion date

March 2010

Building size

7 500m^2

Photo: Peter Bennetts Photography.

“We developed a very careful lighting plan based on our experience with ACCA,” he adds. “The in-ground lights have an orange lens and are concentrated on the convex portions of the plan, so that the reading of the building changes dramatically at night.”

According to Australian Pavilion organisers, Wood Marsh’s innovative design responds admirably to the Expo theme, by embodying Australia's approach to smart manufacturing, design and environmental sustainability.

“Australia's is a striking national pavilion, where targeted trade and investment promotion activities, and associated cultural and communications programs, will further enhance our already strong bilateral links with China,” says Australia’s Commissioner General Lyndall Sachs. “Consistent with the Expo theme, 'Better City, Better Life', our pavilion promotes Australia's cities, which are consistently ranked amongst the most liveable in the world, as ideal places in which to study, live and work. The pavilion also focuses on the creativity of Australian people, the drivers of our better cities and better lives.”

Internally, the pavilion accommodates up to 40,000 visitors each day in three distinct public areas designed by creative design firm Think!OTS. Journey takes visitors past six exhibition elements in the 160-metre long, glass-enclosed ramp that wraps around the façade and punctures its skin.

While Antony Martin was in Shanghai putting the finishing touches on the building, several soft opening events took place prior to Expo’s official launch, and the architect was thrilled with the crowd’s reaction to the design. “When I was there on a VIP day, there was an enormous queue to enter. People are amazed by the pavilion, it’s a very popular building,” he says.

Part of its appeal surely derives from its unmistakeable ‘Australian-ness’, Martin concludes. “One of the aspects that we are most proud of is that, while some of the other pavilions boast amazing architecture, they are not necessarily representative of their countries, but the Australian Pavilion manages to do both,” he says. “Weathering steel was at the centre of our design concept: it’s the form and material that best represents the unique landforms of the Red Centre.”

TWO HOUSES EXPOSE STEEL

Steel Awards 2010 gave us some interesting architectural entries. The residential projects did not have a category of their own, but two of the houses the judging panel visited were good examples of exposed architectural steel and worth a closer look.

The impressive entrance canopy and 'nougat' wall of the Vredefort Dome house.

CONTEMPORARY FARM HOUSE ON THE WORLD HERITAGE SITE, VREDEFORT DOME

Architect's concept and design

The concept of the house draws its idea from the surrounding environment - the hills and valleys of the Vredefort dome just outside Parys. The setting is natural, unspoiled and preserved with scattered boulders as a reminiscent of the dome created millions years back by the strike of a meteorite.

The house rises from the boulders and blends seamlessly with its surroundings, embraces the breathtaking view of the faraway valley and the meandering ribbon of the river. Its aesthetical principle is not to dominate the nearby surroundings, but simply to become a part of it.

The entrance canopy is the reflection of the undulated land contour. The front stone 'nougat' wall is constructed from concrete and local boulders and unifies the local habitation with the house. The multiple punctures in the wall allow for the north light to penetrate the interior of the house; not only warming up the interior but creating wonderful playful light effects. The openings of various shapes and sizes allow the external landscape to make its way into the inner space. The exterior becomes the interior, the interior reflects the exterior.

The house is built out of natural raw material (stone, steel, timber used internally and externally alike) and this achieves the architect's brief to integrate house and surroundings. The structure is honest and all material is exposed and not covered to become a bold part of the aesthetics. The steel details are simple, raw and visible and seem to bring all the elements of the structure together.

The steel portal frames are a striking aesthetic feature of the house. To achieve the architect's large flanged sections the irregular portal frames were designed and constructed from a 340 x 200 x 4.5 mm thick rectangular hollow section with 340 mm wide x 4.5 mm thick steel plates welded on either side to form the flanges. The sections were sized to allow for a reduction in sectional area due to corrosion and still be structurally sound for the structures intended life. The initial 'rusted' look was achieved by acid washing the steel on site.

project team

Developer/Owner:
David Coutts Trotter

Architect:
DSA Architects International

Structural engineer:
WSP Structures Africa (Pty) Ltd

Quantity surveyor:
MLC Quantity Surveyors

Main contractor:
Zenith Application Services

Steelwork contractor:
JJ Fabricators cc

The roof support structure spans between the portals at the lower flange of the RHS, instead of over the top to reveal the 'winged' flanges and is hidden between the roof sheeting and ceiling from view. The balconies and stairs were constructed using grade 350W I sections and parallel flanged channels connected into the RHS.

The wave shaped entrance canopy was designed using circular hollow sections cantilevering out of the concrete feature wall supporting curved parallel flanged channels on two sides and tapered plate sections forming the steel frame, with rectangular hollow sections forming the internal support grid.

HOUSE MEYER, HIGGOVALE, CAPE TOWN

The project consists of a new private residential building situated on the slopes of Table Mountain. The buildings are structured into four individual pavilions. The landscaping is arranged on three terraced levels integrating the individual pavilions. Access is via the top road where the parking garage and the main bedroom pavilion are situated. The other three bedrooms, games room and living areas are below this level forming another 'pavilion'. A large level lawn and swimming pool extend the living areas to the outside which is framed by a magnificent view. This was a real achievement on such a steep site. A tennis court completes the lowest level.

The structural concept of the building can be broken down in a simple legible format namely concrete pillars and beams which forms a concrete gutter. These

The floating roof of House Meyer with the mountain as its spectacular background.

components are then connected with an exposed steel sub structure and the panels are cladded with glass or timber walls.

Although steel was not the primary material its influence in the design was paramount to the success of

The four pavilions are linked with an innovative exposed steel, glass and timber passage.

the project as a whole. The concrete pillars and beams are visually 'heavy' and the architect wanted the rest of the components to be the exact opposite. The roofs (entirely supported on 100mm square steel posts along the length and 203mmx 203mm IPE sections along the width) appear to be floating.

The four pavilions are linked with an innovative exposed steel, glass and timber passage, which culminates in a dramatic double volume steel staircase. The roof of both the passage and stairwell is constructed of glass supported on steel sections. It was important that this connecting element reads as a very visually light structure – this was the primary reason why steel was chosen.

Durability (if treated correctly), speed of construction and cost effectiveness are other advantages of using steel in a residential project. But this is not without its challenges. The bolt holes in the steel work were drilled before galvanising which required meticulous attention to detail.

project team

Architect:
Paolo Deliperi Architect

Structural engineer:
Loctan Engineering

Main contractor:
The Building Company

Steelwork contractor:
Loctan Engineering

The steel portal frames are a striking aesthetic feature of the Vredefort Dome house.

"Selling the notion of using steel in a residential project can also pose to be a challenge as there is a perception that exposed steel, particularly in a residential application, is sometimes referred to as 'too masculine'. But when used in conjunction with other materials like concrete, timber and glass, steel becomes an important player in the pallet of materials as is evident in this contemporary work of architecture," says the architect Paolo Deliperi.

A great deal of attention was paid to the simplicity of the detailing of the building and in particular to all the exposed steel elements and how this material meets the more conventional brick and concrete structure. Smaller components were also designed in steel to create a dialogue with the main structural steel components. These include the staircase, sunscreens, moving shutter frames, pergolas, truss ties, custom chimney cowls and even custom designed gargoyles to get rid of the storm water in an elegant way.

Although the different shades of natural sunlight is experienced to great effect throughout the day, the building is equally interesting at night, when the timber, glass and steel are displayed to full effect. At night the floating roofs and links connecting the pavilions become even more apparent.

Members of the SAISC Board for 2011.

SOCIAL SNIPPETS

By Marlé Lötter,
Events Manager, SAISC

SAISC AGM 2010

The formal activities of the SAISC for 2010 were concluded with our AGM on 18 November 2010 at the Country Club Johannesburg. This event once again comprised multiple sessions for the executive bodies of the SAISC and its divisions, SASFA and ISF, with the purpose of considering the outcome of business through the preceding year and also to newly appoint or re-elect members to the respective boards and committees. In spite of the impact of the 2010 World Cup the SAISC still had an extremely busy year, hosting at least 50 public events to 3247 attendants. The official SAISC Annual Report for 2010 was released at the AGM. Copies were mailed to all SAISC members and can be requested from the SAISC office.

The following persons will serve on the Board of SAISC in 2011:

Ricardo Avellini, Dave Dawkshas, Kobus de Beer, Hennie de Clercq (Executive Director), Charles Dednam, Spencer Erling (Director Education), Jim Guild, Brent Harris, Freddie Herselman, Molefe Kgomo (Chairman, 2nd year), Mike Lomas, Michael Mamotte, Kobus Marais, Helgaard Meaker (Treasurer), Johann Nel, Neil Penson, Malcolm Royal, John Swallow, Tim Tasioulas, Neels van Niekerk

SASFA Exco members for 2011:

John Barnard (Director), Hannes Basson, Steve Cullender, Hennie de Clercq, Brent Harris (Chairman), Garry Hoey, Reitze Hylkema, Len Lategan, Stewart Murray, Harold Rugara, Andre Schlunz, Andrew Scott, Johan Stoltz, Jurgen Stragier

The Board of ISF for 2011:

Francis Braz, Dave Dawkshas, Kobus de Beer, Hennie de Clercq, Charles Dednam, Spencer Erling, Michael Mamotte, Kobus Marais (Chairman), Dodds Pringle, Elwyn Steenkamp, Neels van Niekerk (Director), Alan van Rooyen

After the formal AGM procedures members enjoyed some quality networking during a social cocktail function. Guest speaker Dawie Mullins of

Conningarth Economists, assisted by Jeaunés Viljoen, presented a look into the multiplier effect of the steel industry on the general economy.

SASFA YEAR-END CELEBRATION

SASFA may well be the light steel frame division of the Institute, but it had a heavy share of training courses and industry commitments throughout the year. Initiating an accreditation process for LSFB building systems (with the assistance of the University of Stellenbosch) and continuously promoting the general acceptance of LSFB through the release of SANS 517, official Standard for Light Steel Frame Building, count among the accomplishments. SASFA committee members ended the year in fine style over lunch at Avianto on 2 December 2010.

SAISC COMMITTEE MEMBERS' BREAKFAST, 20 JANUARY 2011

The first official event on the SAISC calendar was a special breakfast for newly appointed and re-elected members of all the committees of SAISC, ISF and SASFA on 20 January 2011.

More than 80 guests enjoyed serious networking with industry colleagues and had a sneak preview into SAISC events and courses scheduled for 2011. The highlight was the guest presentation by Allan Widlake of Murray & Roberts. Allan shared his first hand knowledge and experience of the remarkable Chilean miners rescue project, taking a look at the problems that were posed and the engineering solutions that were considered and ultimately implemented to enable the amazing rescue of all 33 miners. This event must certainly count among the most inspirational occurrences of our time on account of so many positive aspects, including the synergy of engineering skills across borders.

A special version of the guest presentation by Allan Widlake is available for download from the SAISC web site – Alternatively, please contact Pamella Mnyanda: pamella@saisc.co.za

From left: Garry Hoey (Global Innovative Business Systems) and Len Lategan (Innosteel) with Brent Harris (Vela Steel Building Systems / SASFA Chairman 2011), SASFA 2010 year end lunch at Avianto.

Guest presenter Allan Widlake of Murray & Roberts addressed SAISC committee members about challenges faced and solved with the Chilean miners rescue project of 2009.

2011 – TWO SPECIAL EVENTS IN THE LINE-UP

SAISC Golf Day 2011: Wednesday, 11 May

This year we are playing at the modern facilities of Houghton Golf Club, a little later in the year than usual to dodge the rainy season and a flurry of public and school holidays throughout April. (Alliance hosts should perhaps bear the latter in mind and start putting their teams together sooner rather than later.)

Booking forms and sponsorship packages will become available shortly. In the interim all interested parties can drop a line to Marlé Lötter: marle@saisc.co.za

Awards Dinner: Thursday, 15 September

Once again this event will be hosted at three venues:

Gauteng:	Centre Court at Emperors Palace, Kempton Park
Durban:	Sun Coast Casino – to be confirmed
Cape Town:	Venue to be advised

Event information will be sent to all members and will also be on the SAISC web site. By default all parties interested in attendance or possible event sponsorship for the Awards dinner can contact Marlé Lötter: marle@saisc.co.za

THE STEEL CONSTRUCTION AWARD FOR EXCELLENCE IN THE USE OF STRUCTURAL STEEL

SAISC STEEL AWARDS 2011

The 30th Event

and Photo Competition – Best Steel Award Entry Photo!

Closing date for nominations: 6 May 2011

SAISC Steel Awards Dinner: 15 September 2011

PHOTO COMPETITION

COMPETITION PRIZE:

The photographer of the best Steel Award Entry Photo will receive a prize to the value of R10 000

The winning photo will be chosen from all the entries received for Steel Awards

The competition will be judged by the Steel Awards judging panel as well as an experienced photographer.

The winner of the competition will be announced at the Steel Awards function. Special recognition and publicity will be given to the project from which the winning photo was chosen.

All nominations will be entered for the competition. If the nominator does not select a photo from the images submitted with the entry, the SAISC will select one of the images as an entry for the competition.

More details about the competition will be added shortly – visit www.saisc.co.za

CRITERIA AND CONDITIONS OF ENTRY

Categories:

There are no fixed categories in which to enter projects except the Tubular and Light Steel Frame Building Categories. Judges decide on the categories and winners in the respective categories based on the actual entries received every year.

In 2010 the following categories were covered:

- Overall Winner
- Tubular Structures
- Community Development
- Architectural Structures
- Infrastructure
- Light Steel Frame Building
- Mining and Industrial
- Bridge

We do our best to give ALL projects entered some publicity – so please enter the projects you are most proud of.

Criteria for adjudication:

The primary criterion: *Does the project illustrate what can be achieved with steel?*

Other factors to be considered:

- Steel as a structural component of the project
- Benefits achieved by using steel
- Innovation
- Engineering expertise
- Export
- Special details
- Any other unique features
- Environmental / sustainability consideration
- Aesthetic appeal
- Technical skill
- Tubular content
- Client satisfaction
- Value to community

Conditions of entry:

- Substantial completion of the steelwork must have occurred in 2010.
- South African steelwork contractors must have played a significant role.
- The nominator assumes responsibility for the accuracy of all information and provides assurance that permission for the submission has been obtained from the client.
- Written and illustrative material will become the property of the SAISC.
- The SAISC reserves the right to publicise the nominations and awards as it sees fit.
- The SAISC may visit short-listed structures for adjudication, publicity or filming purposes. The nominator and members of the project undertake to assist in arranging such visits.

Material to be submitted:

To enable the SAISC to give proper publicity to the nominations, the following is requested:

1. The fully completed entry form
2. Pictures of the project
3. A description of the project and a motivation for entering the project

To submit an entry you can either:

1. Enter Online: www.saisc.co.za/steel_awards_2011
2. Courier/hand deliver
3. Post

For further information go to www.saisc.co.za and click on the Steel Awards button on the home page or contact Reneé Pretorius renee@saisc.co.za

STRUCTURAL STEEL FRAMED BUILDINGS

By Paolo Trinchero, Chairman – Engineering Committee

The steel construction industry, including fabricators and service centres have invested in the latest equipment available on the market today. New products such as cellular beams and ultra-shallow floors beams are available, and modern design and detailing software make it easy to turn concepts into reality.

Over the years the SAISC and the steel construction industry have promoted and been involved in the construction of structural steel framed buildings (parking garages, hospitals, medium and high-rise offices and residential buildings).

In the next few issues of Steel Construction we will attempt to showcase recent projects and tackle technical issues of relevance to clients, designers and construction professionals.

There are a number of advantages in using structural steel framed buildings:

- Speed of construction or early occupation
- Project costs in the UK and USA have been lower
- Aesthetic appeal
- Design flexibility with larger column free space
- High strength
- Ease of design
- Sustainability
- Innovative technology
- Future-proof investment which can be modified easily
- Reduced risks with a material that is reliable and predictable
- Readily available

The steel construction industry, including fabricators and service centres have invested in the latest equipment available on the market today. New products such as cellular beams and ultra-shallow floors beams are available, and modern design and detailing software make it easy to turn concepts into reality.

Please keep an eye out for SAISC newsletters, magazines and websites on issues pertaining to structural steel framed buildings.

We would like to invite input from our members so please do not hesitate to comment on our initiatives. Now is the time to get involved in this exciting initiative.

STUDENT LABORATORY EXPERIENCE AT THE UNIVERSITY OF JOHANNESBURG

By Spencer Erling,
Education Director, SAISC

Lecturer Nick Sfarnas explains the deflection measurement to a student.

BACKGROUND

Somehow we do not think of Universities of technology having laboratories or research facilities. Well when it comes to the University of Johannesburg think again!

I suppose the SAISC exposure to the fact that there are laboratories at UJ started some years ago when we were approached to help supply some IPE beams for testing purposes in the laboratories.

Now in the 'good old days' it was possible to get the beams donated from Macsteel, financial times are a bit harder these days. They still supply the beams at a very reasonable cost plus basis. Our grateful thanks go out to Macsteel for the help they give us in supporting university research projects. The SAISC pays half the costs and UJ pays the other half.

But until a few weeks ago that was our involvement.

What a pleasant surprise to receive a visit from Johan de Koker (Head of department Civil Engineering Technology at UJ) at our office with an open invitation to come and see what was in fact going on in their laboratory, involving their third year diploma students.

What an even more pleasant surprise when on taking up the invitation to visit UJ to find an industrial building with cranes inside, complete with testing equipment including a 100 ton capacity hydraulic press, 50 ton capacity load cells, strain gauges, inclinometers and the like all linked up to a laptop with sophisticated software.

THIS YEAR'S LABORATORY THEME

Cronje Bruwer and Nick Sfarnas are the lecturers who make it all happen. To the extent that Nick even does the welding.

This year they were studying the impact of different types of end connections on the deflection of the beam under load and if possible to determine the capac-

What an even more pleasant surprise when on taking up the invitation to visit UJ to find an industrial building with cranes inside, complete with testing equipment including a 100 ton capacity hydraulic press, 50 ton capacity load cells, strain gauges, inclinometers and the like all linked up to a laptop with sophisticated software.

The hydraulic press starts to press down on the beam.

ity of the different style beams. All beams are the same test length.

Four different IPE profiles were tested (IPE 100, 120, 180 and 200). Four different end connection types were also tested i.e. bolted web cleats, bolted web and flange cleats (Moment connections), flange cleats on their own and finally welded end plates.

The enthusiasm of the students was palpable. The mood rising with a greater group of onlookers (not just the team involved in the particular test) gathering as the load test neared its climax. Some of the failures came with noise, some with spectacular failures.

Active participation of the students at UJ.

CONCLUSION - THE FUTURE

What a great way to reinforce the theories we learn by proving them in laboratories. UJ also have a programme of testing reinforced concrete beams. Cronje is currently about to test some composite concrete and steel beams where the steel is in fact thin sheet or plates glued with adhesive to the underside.

Best news of all is that the department has received more funding to purchase even more sophisticated equipment so the future looks good.

TRAINING

A strong response from industry has already seen it train some fifty structural steelwork detailers, current students included.

STEEL CONSTRUCTION DRAUGHTING SCHOOL GAINS CETA ACCREDITATION

The SAISC/DSE School of Draughting has been accredited by the Construction and Education and Training Authority (CETA) and is now able to offer students a National Diploma in Structural Steelwork Detailing.

The school, a joint initiative between the SAISC and DSE Structural Engineers and Contractors, opened its doors three years ago in order to help address the severe draughting skills shortage in the steel construction industry. A strong response from industry has already seen it train some fifty structural steelwork detailers, current students included.

A Recognition of Prior Learning (RPL) programme will also be implemented, which will give existing draughtspersons the opportunity to obtain the National Diploma, pegged at National Qualifications Framework (NQF) Level 5, through the school.

The Draughting School is located at DSE head offices in Steeledale, Germiston and is open for the whole of the steelwork industry. It is a Section 21 company with a board of directors, with members from the SAISC, DSE and from industry as well as an executive committee.

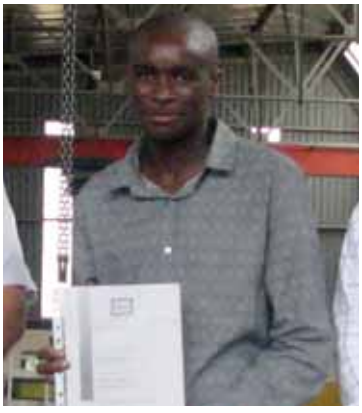
ASSEMBLER'S COURSE GAINS MOMENTUM

The SAISC assembler's course has been implemented by a growing number of steelwork contractor companies. Khombanani Steel and Tass Engineering added two more graduates to the list of skilled workers on their way to become experienced boilermakers. The course is designed to be an in-house, fast-track, skills importing programme, which emphasises the practical over the theoretical.

Spencer Erling, the Institute's education director prepared and collated all the material for the course that will enable workers to become partially trained artisans in a much shorter time than the current apprenticeship programme.

The course was designed to help lower-skilled workers, who do not meet the full requirements for an apprenticeship in the industry, to become recognised skilled workers within the industry.

The students, Daniel Matjana (Khombanani Steel) and Ishmael Manzini (Tass Engineering) received their certificates at Khombanani Steel's year-end function on 3 December 2010.



STEEL PRODUCERS

ArcelorMittal South Africa
Representative: Charles Dednam
Tel: (016) 889 9111 Fax: (016) 889 5668
charles.dednam@arcelormittal.com
www.arcelormittal.com

Davsteel (Pty) Ltd
Representative: Coen Otto
Tel: (016) 980 2121 Fax: (016) 988 3760
ottoc@capegate.co.za
www.capegate.co.za

Scaw Metals Group
Representative: Chris Booysen
Tel: (011) 842 9364 Fax: (011) 842 9705
millsales@scaw.co.za
www.scaw.co.za

STEELWORK CONTRACTORS

Eastern Cape

Project Services
Representative: Arthur R White
Tel: (041) 452 2151 Fax: (041) 456 1121
arthur.w@projectservices.co.za

Gauteng

A Leita Steel Construction (Pty) Ltd*
Representative: Claudio J Leita
Tel: (012) 803 7520 Fax: (012) 803 4360
claudio@aleita.co.za
www.aleita.co.za

Bessemer (Pty) Ltd
Representative: Fritz Hoogendyk
Tel: (011) 762 5341 Fax: (011) 762 5345
bessemer@iafrica.com

Betterect (Pty) Ltd
Representative: Thomas Siebert
Tel: (011) 762 5203 Fax: (011) 762 5286
betterect@betterect.co.za
www.betterect.com

Boksan Projects cc
Representative: L Boksan
Tel: (011) 316 2172 Fax: (011) 316 1645
laszlo@boksan.co.za

Branch Engineering (Pty) Ltd*
Representative: Shannon Van Den Heuwel
Tel: (011) 493 1197 Fax: (011) 493 7884
shannon@branchengineering.co.za

Cadcon cc
Representative: Richard Butler
Tel: (012) 664 6140 Fax: (012) 664 6166
richbutler@cadcon.co.za
www.cadcon.co.za

Carbon Steel Fabricators
Representative: Gerhard Van Zyl
Tel: (011) 762 5209 Fax: (011) 762 7723
gerhard.vanzyl@vbvholdings.com
www.vbvholdings.com

Central Welding Works
Representative: Stephen Horwitz
Tel: (012) 327 1718 Fax: (012) 327 1727
stephen@cwwpta.co.za

CIS Engineering (Pty) Ltd
Representative: Christo Marais
Tel: (016) 422 0082 Fax: (016) 422 0975
christo@cisengineering.co.za
www.cisengineering.co.za

Concor Engineering*
(a Division of Concor Holdings (Pty) Ltd)
Representative: Jean Charoux
Tel: (011) 249 7800 Fax: (011) 249 7984
jcharoux@concor.co.za
www.concor.co.za

Cosira International (SA)*
Representative: John da Silva
Tel: (011) 626 2317 Fax: (011) 626 2917
john.dasilva@cosiragroup.com
www.cosiragroup.com

Crimson Clover Trading 9 (Pty) Ltd
t/a SpanAfrica Steel Structures
Gauteng branch
Representative: Peter Commons
Tel: 082 901 2607
gauteng.sales@spanafrica.co.za

DSE Structural Engineers & Contractors*
Representative: Gary Jones
Tel: (011) 871 4111 Fax: (011) 871 4141
gojones@grinaker-lta.co.za
www.dse.co.za

Fabricated Piping Systems SA (Pty) Ltd
Representative: Craig Fyall
Tel: (011) 828 4388 Fax: (011) 828 2147
craig@fabpipe.co.za

Ferro Eleganza (Pty) Ltd
Representative: Chris Narboneses
Tel: (012) 803 8035 Fax: (012) 803 5645
chris@ferroe.co.za
www.ferroe.co.za

Genrec Engineering (Pty) Ltd*
Representative: Michael Mamotte
Tel: (011) 876 2300 Fax: (011) 827 1733
michael.mamotte@murrob.com
www.genreceng.com

IVMA Engineering cc
Representative: Mauro Munaretto
Tel: (011) 814 3124 Fax: (011) 814 1505
ivma@ivma.co.za
www.ivma.co.za

Khombanani Steel (Pty) Ltd
Representative: Tim Tasioulas
Tel: (011) 975 0647 Fax: (011) 970 1694
accounts@khombanani.co.za

L & D Contracting cc
Representative: Donald Koertzen
Tel: (011) 786 2429 Fax: 0865 082 543
donaldk@icon.co.za
www.ldc.co.za

Linrose Engineering Gauteng (Pty) Ltd*
Representative: Jorge Pereira
Tel: (011) 827 0314 Fax: (011) 827 0878
linrose@icon.co.za
www.linrose.co.za

Louwill Engineering cc
Representative: Deon Kotzé
Tel: (011) 818 5186 Fax: (011) 818 5185
deon@louwill.co.za

MAC Engineering cc
Representative: Mino Carniel
Tel: (011) 814 1834 Fax: (011) 814 6620
maceng@maceng.co.za
www.maceng.co.za

Magnet Engineering (Pty) Ltd
Representative: Paul G Catalo
Tel: (011) 908 3500 Fax: (011) 908 2723
paulocatalo@snet.co.ao

Malitech Engineering
Representative: Sipho Malinga
Tel: (016) 931 2069
smalinga@malitech.co.za
www.malitech.co.za

Mfana Projects cc
Representative: Henry Schoeman
Tel: (011) 900 2489 Fax: (011) 900 2328
henrys@netactive.co.za

Midvaal Structures (Pty) Ltd
Representative: Christo Van Dyk
Tel: (016) 365 5961 Fax: (016) 365 5951
christo@steelstructures.co.za
www.steelstructures.co.za

Moco Steel Engineering cc
Representative: Merlin Labuschagne
Tel: (011) 914 5608 Fax: (011) 914 5612
merlin@mocogroup.co.za
www.mocogroup.co.za

MPW Steel Construction (Pty) Ltd
Representative: Paolo Visentin
Tel: (011) 887 8430 Fax: 0866 856 543
paolo@sgiuricich.co.za

Nancy Engineering
Representative: Ricardo Adriano
Tel: (011) 493 1585 Fax: (011) 493 1564
nanceng@mweb.co.za

Nicholas Structures cc
Representative: Nico Venter
Tel: (016) 366 1605 Fax: 086 610 7993
info@nicholasstructures.co.za
www.nicholasstructures.co.za

Okirand Construction
Representative: Rowan Forte
Tel: (011) 463 1423 Fax: (011) 463 1240
rowan@okirand.co.za
www.okirand.co.za

Omni-Struct Nkosi (Pty) Ltd
Representative: Dave van Asche
Tel: (011) 474 9140 Fax: (011) 474 7487
dave@osn.co.za
www.omnistruct.co.za

PH Projects
Representative : Andries Du Plessis
Tel: (011) 828 0427 Fax: (011) 828 0442
engela@phgroup.co.za
www.phgroup.co.za

Prospan Structures cc
Representative : David Paola
Tel: (011) 440 2116 Fax: (011) 440 2135
david@prospan.co.za
www.prospan.co.za

QM Steel cc
Representative : Quintin Venter
Tel: (011) 864 7885 Fax: 086 594 2008
info@qmsteel.co.za
www.qmsteel.co.za

Renlyn Engineering
Representative : Willie Fourie
Tel: (011) 757 1705 Fax: (011) 757 1587
willie@renlyn.co.za
www.renlyn.co.za

SASSI Metal Innovations cc
Representative: Ignazio Plumari
Tel: (011) 795 4049 Fax: (011) 794 4684
info@sassi-biab.com

SE Steel Fabrication (Pty) Ltd
Representative: David J Essey
Tel: (011) 953 4584 Fax: (011) 660 5855
sesteel@icon.co.za

Sectional Poles (Pty) Ltd*
Representative: Phil M Koen
Tel: (012) 348 8660 Fax: (012) 348 9195
pkoen@sectionalpoles.co.za
www.sectionalpoles.co.za

Spiral Engineering cc
Representative: Colin Kirkland
Tel: (011) 474 9119 Fax: (011) 474 6528
colin@spiralengineering.co.za
www.spiralengineering.co.za

Steel Band Construction cc
Representative: Steven Smit
Tel: (011) 918 2454 Fax: (011) 918 3252
stevesmit@icon.co.za

Structa Technology (Pty) Ltd
Representative: Hercules Rossouw
Tel: (016) 362 9100 Fax: (016) 362 3608
hercules@structa.co.za
www.structa.co.za

Tass Engineering (Pty) Ltd
Representative: Tim Tasioulas
Tel: (011) 975 0647 Fax: (011) 970 1694
tim@tasseng.co.za

Tegmul Engineering (Pty) Ltd
Representative: Toby Esterhuizen
Tel: (016) 362 2007 Fax: (016) 362 1188
tobie@tegmul.co.za

Trentbridge Engineering cc
Representative: David Hunter
Tel: (016) 365 5327 Fax: (016) 365 5320
trentfab@intekom.co.za

Tudor Engineering & Draughting cc
Representative: Braam Beukes
Tel: (011) 914 5163 Fax: (011) 914 5165
hotah@nettron.co.za

Van Driel's Steel Construction
Representative: Robby van Driel
Tel: (016) 341 6102/5 Fax: (016) 341 6685
vdriel@mweb.co.za

Viva Steelfab Engineering (Pty) Ltd
Representative: Collen Gibbs
Tel: (011) 454 3405 Fax: (011) 454 5694
colleng@vivaeng.co.za

WBHO Services North
Representative: Andrew Breckenridge
Tel: (011) 265 4000 Fax : (011) 310 3578
andrewb@wbho.co.za
www.wbho.co.za

Free State

Engski Manufacturing (Pty) Ltd
Representative: Dawie van der Merwe
Tel: (016) 976 2592 Fax: (016) 976 0072
engski@mweb.co.za

KwaZulu-Natal

Avellini Bros (Pty) Ltd
Representative: Pietro Avellini
Tel: (031) 464 0421 Fax: (031) 464 0966
ravellini@iafrica.com

BNC Projects (Pty) Ltd
Representative: Sunthosh Balchund
Tel: (031) 902 3777 Fax: (031) 902 6798
balchunds@bncprojects.co.za
www.bncprojects.co.za

Churchyard & Umpleby*
Representative: Keith Ball
Tel: (031) 705 4008 Fax: (031) 705 5815
keith@candu.co.za
www.candu.co.za

Cousins Steel International
Representative: Adam Oldfield
Tel: (031) 312 0992 Fax: (031) 303 5299
adam@cousinssteel.co.za
www.cousinssteel.co.za

Crimson Clover Trading 9 (Pty) Ltd*
t/a SpanAfrica Steel Structures
Representative: James Pinnell
Tel: (033) 346 2555 Fax: (033) 346 1242
pinnell@sai.co.za

Impact Engineering*
Representative: Douglas Nidd
Tel: (032) 947 1054 Fax: (032) 947 2017
impact@saol.com

Ogilvie Engineering
Representative: Allan Olive
Tel: (031) 700 6489 Fax: (031) 700 6488
ogilvadmin@lantic.net

Pro-Spec Steel Structures
Representative: Tony Jugmohan
Tel: (033) 330 2295 Fax (033) 330 2295
tonyj@telkomsa.net

Rebcon Engineering (Pty) Ltd
Representative: Warren Butler
Tel: (031) 705 5851 Fax: (031) 705 5855
warren@rebcon.co.za
www.rebcon.co.za

Redfab Engineering cc
Representative: Jayram Reddy
Tel: (031) 463 1673 Fax: (031) 463 1659
redfab@iafrica.com

Robsteel Structures cc
Representative: Rob Drysdale
Tel: (032) 946 1922 Fax: (032) 946 2138
rob@robsteel.co.za

Mpumalanga

B&T Steel*
Representative: Trevor van Vuuren
Tel: (013) 665 1914 Fax: (013) 665 1881
marketing@btsteel.co.za
www.btsteel.co.za

Da Costa Construction Welding cc
Representative: Vivian Swart
Tel: 082 874 6374 Fax: (017) 647 6091
vivian@dcconstruction.co.za

Powerstation Engineering Services
Representative: Henro Pretorius
Tel: (017) 712-4837 Fax: (017) 712-4803
pse@pseservices.co.za
www.pseservices.co.za

Quality Steel
Representative: Andre D Potgieter
Tel: (013) 752 2723/4 Fax: (013) 752 2407
andre@qualitysteel.co.za
www.qualitysteel.co.za

Tecco Engineering cc
Representative: Neels Welsh
Tel: (013) 246 2261 Fax: (013) 246 2262
tecdraft@lantic.net

Tubular Technical Construct (Pty) Ltd
Representative: Jorge Bonifacio
Tel: (013) 690 2335 Fax: (013) 656 2408
jorge@tubular.co.za
www.tubular.co.za

Witbank Engineering
Representative: Flip J. Van Rensburg
Tel: (013) 690 1379 Fax: (013) 656 4920
weas-lc@mweb.co.za

North West

Rutherfords
Representative: Cecil Rutherford
Tel: (018) 293 3632 Fax: (018) 293 3634
cecilr@rutherfords.co.za
www.rutherfords.co.za

Western Cape

Inenzo Water (Pty) Ltd
Representative: Jan Cloete
Tel: (021) 948 6208 Fax: (021) 948 6210
jcloete@inenzo.com
www.inenzo.com

Konti Industries
Representative: Costa Kontopirakis
Tel: (021) 852 2559 Fax: (021) 852 3115
steel@jkpg.co.za
www.jkpg.co.za

Mazor Steel cc
Representative: Shlomo Mazor
Tel: (021) 556-1555 Fax: (021) 556-1575
judy@mazor.co.za
www.mazor.co.za

Prokon Services (Pty) Ltd
Representative: Martin Lotz
Tel: (021) 905 4448 Fax: (021) 905 4449
martin@prokonservices.co.za
www.prokonservices.co.za

Scott Steel Projects
Representative: Dave N Scott
Tel: (021) 671 3176 Fax: (021) 671 8736
dave@scottsteel.co.za

Union Structural Engineering Works
Representative: Mike N Papanicolaou
Tel: (021) 534 2251 Fax: (021) 534 6084
michael@unionsteel.co.za
www.unionsteel.co.za

DEVELOPING MEMBERS

Arctex cc
Representative: Lenin Kiviet
Tel: (011) 900 4136 Fax: (011) 900 1837
arctex@netactive.co.za

RSG Engineering
Representative: Rudzani Mposi
Tel: 073 191 8943 Fax: 086 525 5973
rsgengineerin@gmail.com

Four Tops Engineering Services cc
Representative: Essau Motloung
Tel: 072 229 9128 Fax: 0866 911 619
fourtopseng@vodamail.co.za

Sach-Warr Construction cc
Representative: Kesavan Moonsamy
Tel: 083 283 6636 Fax: (011) 760 2595
sachwarr@polka.co.za

Spartan Metal Works
Representative: Kagiso Mokoka
Tel: (011) 970 3410 Fax: 086 536 5986
kagisom@spartangroup.co.za
www.spartangroup.co.za

Zamani Engineering Services cc
Representative: David Nkosi
Tel: (013) 656 1978 Fax: (013) 656 1979
admin@zamaniengineering.co.za

STEEL MERCHANTS & SERVICE CENTRES

Gauteng

Argent Steel Group
Representative: Leon Coetzee
Tel: (011) 876 4000 Fax: (011) 876 4014
phoenix1@argent.co.za
www.argent.co.za

Clotan Steel
Representative: Danie Joubert
Tel: (016) 986 8000
Fax: (016) 986 8050
daniej@clotansteel.co.za
www.clotansteel.co.za

General Profiling (Pty) Ltd
Representative: Gavin Poplak
Tel: (011) 839-2917 Fax: (011) 837-1617
sales@generalprofiling.co.za
www.generalprofiling.co.za

KMG Steel Service Centres*
Representative: Tony Windt
Tel: (011) 929 5000 Fax: (011) 929 5062
tonyw@kmg.co.za
www.kmg.co.za

Macsteel Service Centres SA (Pty) Ltd*
Representative: Dave Dawkshas
Tel: (011) 871 0000 Fax: (011) 824 4994
dave.dawkshas@macsteel.co.za
www.macsteel.co.za

Macsteel Trading Germiston South
Representative: Granville Rolfe
Tel: (011) 871 4677 Fax: (011) 871 4667
granville.rolfe@mactrading.co.za

Macsteel V R N
Representative: Mike Hall
Tel: (011) 861 5200 Fax: (011) 861 5203
Mike.Hall@vrn.co.za
www.vrnsteel.co.za

NJR Steel Holdings (Pty) Ltd
Representative: Michael Riley
Tel: (011) 477 5515 Fax: (011) 477 5550
mriley@njrsteel.co.za
www.njrsteel.co.za

Stewarts & Lloyds Holdings (Pty) Ltd
Representative: Ronnie Turner
Tel: (011) 553 8500 Fax: (011) 553 8510
ronniet@sltrading.co.za
www.stewartsandlloyds.co.za

Trident Steel (Pty) Ltd*
Representative: Alan van Rooyen
Tel: (011) 861 7111 Fax: (011) 865 2042
Tel: (011) 908 4686 Fax: (011) 864 7629
alan.vanrooyen@trident.co.za
www.trident.co.za

KwaZulu-Natal

BSI Steel Limited
Representative: Lee Daff
Tel: (033) 846 2222 Fax: (033) 846 2233
lee.daff@bsisteel.com
www.bsisteel.com

Macsteel Trading Durban
Representative: Paul Simpson
Tel: (031) 913 2600 Fax: (031) 902 2345
paul.simpson@mactrading.co.za

Western Cape

Macsteel Trading Cape Town
Representative: Marinus Muilwijk
Tel: (021) 950 5500 Fax: (021) 950 5600
Marinus.muilwijk@mactrading.co.za

Transcape Steels (Pty) Ltd
Representative: Carl van Rooyen
Tel: (021) 534 3211 Fax: (021) 534 5890
carlvr@transcape.co.za
www.transcapesteels.co.za

STEEL PRODUCT MANUFACTURERS

Gauteng

Augusta Profiles (Pty) Ltd
Representative: Rory Whelehan
Tel: (011) 914 4628 Fax: (011) 914 4748
augsteel@iafrica.com

Bolt & Engineering Distributors
Representative: Mike Giltrow
Tel: (011) 824 7500 Fax: (011) 824 0890
mike@bolteng.co.za
www.bolteng.co.za

Cavotec Gantrex (Pty) Ltd Group
Representative: Johann M Jankowitz
Tel: (011) 963 0015 Fax: (011) 963 0064
gantrex@netactive.co.za
www.cavotec.com

CBC Fasteners (Pty) Ltd
Representative: Rob J. Pietersma
Tel: (011) 767 0000 Fax: (011) 767 0150
rob@cbc.co.za
www.cbc.co.za

First Cut (Pty) Ltd
Representative: Steve Van Wyk
Tel: (011) 872 1138 Fax: (011) 873 3066
stevev@firstcut.co.za
www.firstcut.co.za

Geo Stott & Co (Pty) Ltd*
Representative: Dennis Dedwith
Tel: (011) 474 9150 Fax: (011) 474 8267
dennis@geostott.co.za
www.geostott.co.za

Global Roofing Solutions (Pty) Ltd
Representative: Johan van der Westhuizen
Tel: (011) 898 2902 Fax: (011) 892 1455
johan@globalroofs.co.za
www.globalroofs.co.za

Grating World (Pty) Ltd
Representative: George Whittle
Tel: (011) 456 5250 Fax: (011) 452 2536
george@gratingworld.co.za
www.gratingworld.co.za

Horne Hydraulics cc
Representative: Bernadine Teessen
Tel: (011) 974 1004 Fax: (011) 392 5650
bernadine@horne.co.za
www.horne.co.za

IBC (Integrated Business Construction) International (Pty) Ltd
Representative: Tristan Todd
Tel: (011) 425 3190 Fax: (011) 425 4308
tnt@ibc-int.com

Le Blanc Communications SA
Representative: William Brough
Tel: (011) 814 1404 Fax: (011) 814 1444
rosstan@worldonline.co.za
www.lightingstructures.co.za

Macsteel Roofing
Representative: Dennis White
Tel: (011) 878 7500 Fax: (011) 827 1890
dennis.white@macroofing.co.za

Macsteel Tube and Pipe
Representative: Peter Curr
Tel: (011) 897 2100 Fax: (011) 826 6333
peter.curr@mactube.co.za

Mentis Sales
Representative: Chris Green
Tel: (011) 255 3200 Fax: (011) 828 1463
cjgreen@mentis.co.za
www.mentis.co.za

MiTek Industries SA (Pty) Ltd
Representative: Richard Bailey
Tel: (011) 237 8700 Fax: (011) 314 3978
rbailey@mitek.co.za
www.mitek.co.za

Project Materials Southern Africa (Pty) Ltd
Representative: Nishal Sheoprosad
Tel: 082 567 2844 Fax: 086 605 7194
nishal.sheoprosad@pmpiping.com

Robor (Pty) Ltd
Representative: Franco Mordini
Tel: (011) 977 2029
francom@robor.co.za
www.robor.co.za

Robertson Ventilation International (RVI)
Representative: Eric Whelan
Tel: (011) 608 4640/1 Fax: (011) 608 6443
ericw@robventind.co.za
www.robventind.co.za

Safintra (Pty) Ltd
Representative: Sarit Shah
Tel: (011) 944 6800 Fax: (011) 783 1128
sarit@safalgroup.com
www.safalgroup.com

Steel Fabrication Consultants & Allied Services
Representative: Alan Armitage
Tel: (011) 615 7240 Fax: (011) 615 8913
alan.armitage@mds-skills.co.za

Vital Engineering & Angus Mcleod (Pty) Ltd*
Representative: Dodds B Pringle
Tel: (011) 898 8500 Fax: (011) 918 3000
dodds@gratings.co.za
www.gratings.co.za

KwaZulu Natal

Safal Steel (Pty) Ltd
Representative: Tammy Grove
Tel: (031) 782 5500 Fax: 031 782 1400
marketing@safalsteel.co.za
www.safalsteel.co.za

Northern Cape

Rufco Engineering cc
Representative: Gandeloro Ruffini
Tel: (053) 313 1651 Fax: (053) 313 2081
info@rufco.co.za
www.rufco.co.za

Vonmeg Staalwerke cc
Representative: Jacques Goosen
Tel: (027) 712 2606 Fax: (027) 718 1015
vonmegbk@telkomsa.net

North West

Almec Manufacturing
Representative: Joan Basson
Tel: (018) 469 3202 Fax: (018) 469 3200
joanalmec@gds.co.za

PEL Construction
Representative: Ben Delport
Tel: (018) 469 3894 Fax: (018) 469 2783
ben@pel.co.za

WJ Engineering (Pty) Ltd
Representative: Bert J Werkman
Tel: (018) 294 3395 Fax: (018) 294 5472
bwerkman@wjengineering.co.za
www.wjengineering.co.za

TRANSMISSION LINE MANUFACTURERS

Africa Cellular Towers (Pty) Ltd
Representative: Nick VD Mescht
Tel: (011) 907 7364 Fax: (011) 869 9107
nickv@africacellular.co.za
www.africacellular.co.za

Andrew Wireless Solutions Africa
Representative: Sava Savov
Tel: (011) 719 6000 Fax: (011) 444 5393
sava.savov@andrew.com
www.andrew.com

Babcock Ntuthuko Powerlines
Representative: Kevin Kane
Tel: (011) 739 8200 Fax: (011) 739 8201
kevin.kane@babcock.co.za
www.babcock.co.za

Tricom Structures cc
Representative: Udo Topka
Tel: (012) 803 0041 Fax: (012) 803 6040
udo@tricom1.co.za
www.tricom1.co.za

CORROSION & FIRE PROTECTION TO STEEL

Gauteng

Armco Galvanisers (Pty) Ltd
Representative: Dave Fensham
Tel: (011) 974 8511 Fax: (011) 974 8510
mail@armco.co.za
www.armco.co.za

Barloworld Plascon SA (Pty) Ltd
Representative: Graeme Carr
Tel: (011) 951 4500 Fax: (011) 955 2841
gcarr@plascon.co.za
www.plascon.co.za

Bulldog Projects cc
Representative: Mike Book
Tel: (011) 827 4221 Fax: (011) 827 4561
mike@bulldogprojects.co.za
www.bulldogprojects.co.za

Hot Dip Galvanizers Association of SA
Representative: Terry Smith
Tel: (021) 797 4735
terry@hdgasa.org.za
www.hdgasa.org.za

Jotun Paints South Africa (Pty) Ltd
Representative: Charlene Bossert
Tel: 079 880 8533 Fax: (011) 974 7070
charlene.bossert@jotun.com
www.jotun.com

Pyro-Cote cc
Representative: Trevor Miller
Tel: (011) 864 5205 Fax: (011) 908 6636
pyrocotejhb@pyrocote.co.za
www.pyrocote.co.za

Sigma Coatings (Pty) Ltd
Representative: Marius Rademeyer
Tel: (011) 389 4800 Fax: (011) 389 4832
marius.rademeyer@sigmacoatings.co.za
www.pyrocote.co.za

CONSULTING ENGINEERS & PROJECT MANAGERS

Gauteng

Acecad Software Ltd
Representative: Paul Marais
Tel: (011) 452 0811 Fax: 086 552 5129
p.marais@acecad.co.za
www.acecadsoftware.com

Aurecon*
Representative: Tomme Katranas
Tel: (012) 427 2470 Fax: (086) 607 7838
Tomme.Katranas@af.aurecongroup.com
www.aurecongroup.com

Arup (Pty) Ltd
Representative: Ric Snowden
Tel: (011) 997 9025
ric.snowden@arup.com
www.arup.com

Bateman Projects Limited
Representative: Kurt Waelbers
Tel: (011) 899 9111 Fax: (011) 899 2660
kurt.waelbers@batemanengineering.com
www.batemanengineering.com

Bigen Africa Services (Pty) Ltd
Representative: Johann Human
Tel: (012) 842 8751 Fax: (012) 843 9000
johann.human@bigenafrica.com
www.bigenafrica.com

BKS (Pty) Ltd*
Representative: Alwyn Truter
Tel: (012) 421 3500 Fax: (012) 421 3501
alwynt@bks.co.za
www.bks.co.za

Clearspan Structures (Pty) Ltd
Representative: Jeff Montjoie
Tel: (011) 823 2402 Fax: (011) 823 2582
jmo@clearspan.co.za
www.clearspan.co.za

DRA Mineral Projects
Representative: Leon Uys
Tel: (011) 202 8600 Fax: (011) 202 8807
luys@drasa.co.za
www.drasa.co.za

Fluor SA (Pty) Ltd
Representative: Carlo Zambon
Tel: (011) 233 3400 Fax: (011) 233 3522
carlo.zambon@fluor.com
www.fluor.com

Goba (Pty) Ltd
Representative: John Cowden
Tel: (011) 236 3300 Fax: (011) 807 8535
johnc@goba.co.za
www.goba.co.za

Group Five Projects (Pty) Ltd
Representative: Greg Heale
Tel: (011) 899 4697 Fax: (011) 918 2707
gheale@g5.co.za
www.g5.co.za

Hatch Africa (Pty) Ltd
Representative: Francois du Toit
Tel: (011) 239 5300 Fax: (011) 239 5790
fdutoit@hatch.co.za
www.hatch.co.za

Holley and Associates cc
Representative: David Haines
Tel: (011) 803 1159 Fax: (011) 803 0970
david@holleyassociates.com
www.holleyassociates.com

Pollock Williams James & Partners cc
Representative: Tim James
Tel: (011) 679 2282 Fax: (011) 679 384
pwp@iafrica.com

Roymec (Pty) Ltd
Representative: Malcolm Royal
Tel: (011) 804 5123 Fax: (011) 804 5185
malcolm.royal@roymec.co.za
www.roymec.co.za

SH Services
Representative: Simon Du Toit
Tel: (011) 918 1991 Fax: (011) 918 1994
shsccs@global.co.za

SRK Consulting (Pty) Ltd
Representative: Jaya Omar
Tel: (011) 441 1111 Fax: (011) 880 8086
jomar@srk.co.za
www.srk.co.za

TWP Consulting (Pty) Ltd
Representative: Mushir Khan
Tel: (086) 123 1542 Fax: (011) 356 7500
mkhan@twp.co.za
www.twp.co.za

Walker Ahier Holtzhausen (WAH) Engineering Consultants cc
Representative: Graham Cross
Tel: (011) 888 2150 Fax: (011) 888 2296
grahamc@waheng.co.za

WSP Group Africa (Pty) Ltd
Representative: John Truter
Tel: (011) 300 6000 Fax: (011) 361 1595
john.truter@wspgroup.co.za
www.wspgroup.co.za

KwaZulu-Natal

Gavin R Brown & Associates
Representative: Gavin R Brown
Tel: (031) 202 5703 Fax: (031) 202 5708
gavbrown@global.co.za
www.gavbrown.co.za

WSP Structures Africa (Pty) Ltd (KZN)
Representative: Deon Du Plessis
Tel: (031) 240 8950 Fax: (031) 240 8951
deon.duplessis@wspgroup.co.za

Young & Satharia Structural & Civil Eng
Representative: Rob Young
Tel: (031) 207 7252 Fax: (031) 207 7259
rob@yands.co.za
www.yands.co.za

Mpumalanga

Ijubane Projects (Pty) Ltd
Representative: Kobus Badenhorst
Tel: (013) 243 4390 Fax: (013) 243 5005
kobus@glps.co.za
www.glps.co.za

Lategan Bouwer Civil & Structural Engineers
Representative: Anton Van Dyk
Tel: (017) 634 4150 Fax: (017) 634 4188
avandyk@latbou.co.za
www.latbou.co.za

Western Cape

Bergstan South Africa
Representative: Alan Davies
Tel: (021) 487 4900 Fax: (021) 424 7653
alan@bergstan.co.za
www.bergstan.co.za

Kwezi V3 Consulting Engineers
Representative: Pravesh Naidoo
Tel: (021) 912 3000 Fax: (021) 913 3222
pnaidoo@kv3.co.za
www.kv3.co.za

Mondo Cane cc
Representative: Rob Chalmers
Tel: (021) 852 2447 Fax: (021) 852 2447
rob@mondocane.co.za
www.mondocane.co.za

Vela VKE Consulting Engineers (Pty) Ltd
Representative: John Anderson
Tel: (021) 417 2900 Fax: (021) 417 2999
andersonj@velavke.co.za
www.velavke.co.za

MINING HOUSES

Anglo Operations Ltd
Representative: Geoff Krige
Tel: (011) 638 2061 Fax: (011) 638 4636
gkrige@anglotechnical.co.za

SASOL Mining (Pty) Ltd
Representative: Pieter Van Heerden
Tel: (017) 614 5033 Fax: (011) 522 2691
pieterschalk.vanheerden@sasol.com
www.sasol.com

SUPPLIERS OF GOODS AND SERVICES TO THE INDUSTRY

Grinaker-LTA Metals & Minerals*
Representative: Marius Botes
Tel: (011) 681 2252 Fax: (011) 680 1810
mbotes@grinaker-lta.co.za
www.grinaker-lta.co.za

Kaltenbach GmbH & Co
Representative: Joerg Tetling
Tel: 0049 7621 175400
Fax: 0049 7621 175900
j.tetling@kaltenbach.de
www.kaltenbach.de

Skotia International Metals Limited
Representative: Richard Calveley
Scotland
Tel: 0044 189 980 8650
Fax: 0044 189 922 1683
r.calveley@skotiametals.com
www.skotiametals.com

Traceability Solutions
Representative: Kyle Parker
Tel: (011) 794 5299 Fax: (011) 794 2844
kyle@tracesol.co.za

* ALSO A MEMBER OF ISF

SASFA MEMBERSHIP

MAJOR MATERIAL SUPPLIERS

ArcelorMittal South Africa
Producer of steel
Hannes Basson
Tel 016 889 3189
hannes.basson@arcelormittal.com
www.arcelormittal.com

Saint-Gobain Gyproc SA (Pty) Ltd
Producer of gypsum board
Andre Schlunz
Tel 011 345 5300
andre.schlunz@za.bpb.com
www.bpbsa.com

Brits Nonwoven
Producer of insulation products
Albert Hoenck
Tel 082 453 7977
alberth@brits.co.za
www.isotherm.co.za

Group Five Manufacturing (Everite)
Producer of fibre cement board
Annemarie Robertson
Tel 011 903 8049
arobertson@g5.co.za
www.everite.co.za

Saint Gobain - Isover
Producer of insulation products
Andrew Scott
Tel 011 360 8200
Andrew.Scott@isover.co.za
www.owenscorning.co.za

OTHER MATERIAL AND COMPONENT SUPPLIERS

Avlock International
Fastener and equipment supplier
Mohamed Khan
Tel 011 917 2110
mohamed@avlock.co.za
www.avlock.co.za

Du Pont de Nemours
Manufacturer of weatherproofing membranes
Langa Nxumalo
Tel 012 683 5607
langalakhe.nxumalo@zaf.dupont.com
www.tyvek.com

Kare Industrial Suppliers
Distributor of fasteners
Reitze Hylkema
Tel 011 941 3170
reitze@kare.co.za
www.kare.co.za

Marshall Hinds
Distributor of Tyvek Building Wrap
Brett Goelst
Tel 011 627 7750
brettg@marshallhinds.co.za
www.marshallhinds.co.za

Speedfit Africa
Distributer of John Guest Plumbing and associated technology solutions
Gavin van Heusden
Tel 031 569 3073
gavin@speedfitafrica.co.za
www.speedfitafrica.co.za

United Fibre Cement Co (UFCC)
Distributer of fibre cement products
Leon Bekker
Tel 021 933 0052
leon@ufcc.co.za
www.ufcc.co.za

LARGE MANUFACTURERS

Allenby Housing cc
Planning, design, development & manufacture of modular building solutions
Gonaseelan Govender
Tel 031 309 5561
intercom@iafrica.com
www.containerhouses.com

Circle Capital Developments
Profiler and assembler
Nokwazi Mlambo
Tel 011 463 5795
ncm@cicapglobal.co.za
www. icapglobal.co.za

Dezzo Roofing
Profiler and assembler
Brandon Harding
Tel 031 713 6571
brandon@dezzo.co.za
www.dezzoroofing.co.za

Stedone Hazycrest Projects (Pty) Ltd
Construction and profiler
Patrick Swanepoel
Tel 031 713 0737
patrick@stedonehazycrest.co.za
www.stedonehazycrest.co.za

Kwikspace Modular Buildings Ltd
Profiler and assembler
Cole Slabbert
Tel 011 617 8000
cole@kwikspace.co.za
www.kwikspace.co.za

Light Frame Homes cc
Profiler, assembler and builder
Schalk van der Westhuizen
Tel 021 982 6077
schalk@dicksonprojects.co.za
www.steelhomes.co.za

MiTek Industries SA (Pty) Ltd
LSF roof trusses
Richard Bailey
Tel 011 237 8700
richard@mitek.co.za
www.mii.com/southafrica

SA Steelframe Systems
Profiler and assembler of LSF & trusses
Johan Marais
Tel 082 450 0086
johan@steelframe.co.za
www.steelframe.co.za

Siteform Framing
Profiler and assembler
Hendrik Fourie
Tel 051 446 0218
info@siteform.co.za

Tahzade Disaster Management
Manufacturer
Rajan Harinarain
Tel 074 848 8881 / 083 492 3851
tahzade@yahoo.com

Vela Steel Building Systems
Profiler and assembler
Brent Harris
Tel 011 397 8742
brent@velasbs.co.za
www.velasbs.co.za

MANUFACTURERS

Inno Steel
Profiler and assembler
Len Lategan
Tel 011 794 5436
info@innosteel.co.za

Plusko 169 (Pty) Ltd
Profiler, assembler and builder
Frede Van Zyl
Tel 044 695 0237
info@steelframemosbay.co.za
www.steelframemosbay.co.za

Steeltek Systems
Profiler and assembler
Matt Hyland
Tel 058 671 0657
matt@steelteksystems.co.za
www.steelteksystems.co.za

SERVICE CENTRES AND DISTRIBUTORS

ArcelorMittal Construction South Africa
Technical solution for cladding, roofing and flooring
Thierry Poitel
Tel 011 268 2561
Thierry.poitel@arcelormittal.com
www.arval-construction.com

Bluescope Steel Southern Africa (Pty) Ltd
Manufacture Truecore™ Steel
Wayne Miller
Tel 021 442 5420
Wayne.miller@bluescopesteel.com
www.bluescopesteel.com

Clotan
Steel service centre
Danie Joubert
Tel 016 986 8000
daniej@clotansteel.co.za
www.clotansteel.co.za

Clyde Steel
Steel service centre
Previn Thambi
Tel 011 363 1960
previn@clydesteel.co.za
www.clydesteel.com

Global Innovative Building Systems
Distributor of cladding and insulation materials
Tammy Bywater
Tel 011 903 7080
tammy@gissa.co.za
www.gissa.co.za

Global Specialised Systems KZN (Pty) Ltd
Distribute and manufacture insulations products and ducted air cons
Carole Tomkinson
Tel 031 468 1234
carole@globaldbn.co.za
www.globalsystems.co.za

Hage Projects
Structural engineer
Gert Visser
Tel 016 933 0195
gert@molapo.biz

Howick Ltd
Distribute and manufacture specialized roll forming machine
Craige During
Tel +64 09 534 5569 / 072 137 7865 / 083 547 9930
info@howickltd.com
www.howickltd.com

Metal Rollforming SA
Distributor of LSFB equipment
Dirk Moolman
Tel 028 316 1291
sales@metalrollformingsa.com
www.metalrollformingsa.com

Scottsdale
Distributor of LSFB equipment
Steve Cullender
Tel 011 486 4195
scottsdale_sa@global.co.za
www.scottsdale.co.nz

DESIGN CONSULTANTS

AMS Civil & Structural Consultants
Structural design engineer
Anna-Marie Sassenberg
Tel 058 303 7223
ams@isat.co.za

By Design
Structural engineer
Barend Oosthuizen
Tel 021 883 3280
barend@bydesign.org.za

CG Structural Design Services
Structural engineer
Cassie Grobler
Tel 011 472 4476
cassie@cgsds.co.za

Entity Engineering
Structural engineer
Andrew Bull
Tel 011 462 8564
entity1@mweb.co.za

Hull Consulting Engineers
Structural engineer
Mike Hull
Tel 011 468 3447
hull@iafrica.com

Martin & Associates
Structural design engineer
Ian Upton
Tel 031 266 0755
ibu@martinjw.co.za

ASSOCIATE MEMBERS

AAAMSA Group
Promotion of fenestration, insulation and ceiling systems
Hans Schefferlie
Tel 011 805 5002
aaamsa@iafrica.com

CSIR (Built Environment)
National building research institute
Llewellyn Van Wyk
Tel 012 841 2677
lvwyk@csir.co.za
www.csir.co.za

FrameCAD Solutions Limited
Develop and supply end to end LSF
Matthew Day
Tel 00 649 307 0411
md@framecadsolutions.com
www.framecadsolutions.com

HDGASA
Promotion of hot dip galvanized steel sheet
Terry Smith
Tel 011 456 7960
terry@hdgasa.org.za
www.hdgasa.org.za

IZASA
Promotion of the use of zinc
Rob White
Tel 083 456 4989
robwhite@icon.co.za
www.izasa.org

European Light Steel Construction Association (LSK)
www.easysteel.info

National Association for Steel Framed Housing Australia
Ken Watson
kwatson@nash.asn.au
www.nash.asn.au

Pretoria Institute for Architecture
Institute for architects
Maureen Van Wyk
Tel 012 341 3204
admin.pia@saia.org.za
www.saia.org.za

Standard Bank
Provider of home loans
Johann Strydom
Tel 011 631 5977
Johanjj.strydom@standardbank.co.za

University of the Witwatersrand, School of Mechanical Engineering
Educational
Kamil Midor
Tel 011 717 7358
Kamil.midor@wits.ac.za

BUILDING INDUSTRY

AC Group Holdings (Pty) Ltd
LSFB construction, ceilings and partitions
Johan Stoltz
Tel 082 411 0247
0825683011@vodamail.co.za

AMC Land Developments
Developer and builder
Trevor Abrahams
Tel 021 761 6943
trevora@amcld.co.za
www.amcld.co.za

Big Rigging Crew
LSF building
Henry Robinson
Tel 082 898 7693
henryr1@telkomsa.net

Bruün Agencies t/a Eticon Construction
Builder of LSFB and renovations
Wayne Bruün
Tel 083 260 4339
lsfb@eticon.co.za
www. eticon.co.za

Chad Construction
Builder of LSFB
Anton Coetzee
Tel 082 715 9411
Anton@chadcon.co.za
www.chadcon.co.za

Gecko Development Services
Developer and builder
Ryan Hesketh
Tel 083 324 5059
geckodevelopment@telkomsa.net
www.dirasteelhouses.com

Group Five Housing
Developer and builder
Paul Thiel
Tel 011 253 8833
pthiel@g5.co.za

SAFINTRA Building Solutions (Pty) Ltd
Construction/production of LSFB
Patrick Swanepoel
Tel 031 702 9683
patricks@safintra.co.za
www.safintra-buildingsolutions.co.za

Shospec (Pty) Ltd
Shopfitting ceilings, partitions and shop fronts
Bjorn Kahler
Tel 033 386 0100
bjorn@shospec.co.za
www.shospec.co.za

Sixbar Trading 819 cc
Construction
Wayne Barr
Tel 031 768 1183
wayne@sixbarconstruction.co.za

Steel Frame Projects
Builder of steel frame homes and trusses
Johan Venter
Tel 074 128 1840
johan@steelframeprojects.co.za
www.steelframeprojects.co.za

Steelworx Homes (Pty) Ltd
Residential builder
Keith van der Linde
Tel 011 465 2612
keithr@accoladepg.co.za

Tec Homes Construction (Pty) Ltd
Building / supply of LSFB
Schalk VD Walt
Tel 021 852 4237
schalk@techomes.co.za
www.techomes.co.za