The Yellow Book now has a neat A5 format, and it has been updated to bring it in line with present-day practices, steels and codes. We recommend that every designer, detailer of fabricator should have a copy of the updated Yellow Book right there on the desk.

DAVID CARSON APPOINTED AS SEIFSA'S NEW EXECUTIVE DIRECTOR

David Carson has been appointed as SEIFSA's new executive director with effect from 1 January 2009. He replaces Brian Angus, who retired at the end of December.

David joined the Federation in March 1976 and was SEIFSA's operations director immediately prior to this appointment.

He has extensive experience to serve him as executive director:

- Employer Representative on the Manufacturing, Engineering and Related Services - Education and Training Authority (MERSETA)
- Member of the CCMA Governing body

CONSERVING ENERGY FROM THE OUTSIDE IN

Those making the greatest strides in the fight against global warming and the depletion of natural resources are those who recognise the need for low-energy, passive design and innovation.

Global design and engineering-consulting firm Arup is a company at the forefront of ushering in a new era of more sustainable and eco-friendly buildings.

When Arup was awarded with a project to review the Australian green building rating tool – Green Star – Arup mechanical engineer Jacob Knight's expertise was required on energy and indoor environment components, both of which fall under the mechanical engineer's remit.

“We started off with the Australian tool and looked through each part to adapt it for South Africa. Some parts...
ArcelorMittal's CEO, Nonkululeko Nyembezi-Heita and Ms. Naledi Pandor, Minister of Education at the sod turning in Mamelodi.

ARCELORMITTAL SOUTH AFRICA LAUNCHES LONG-TERM PARTNERSHIP WITH THE DEPARTMENT OF EDUCATION

ArcelorMittal South Africa and the Department of Education are proud to announce a partnership to build ten new schools throughout the country using new steel technology. The sod turning at the new primary school for the pupils and community of Mamelodi (in Tshwane) on 2 February 2009 was the first step in this programme.

Mamelodi Primary is scheduled for completion by the end of the year. The remaining nine schools, one school scheduled for each province and two in the Eastern Cape, will be built over the next seven years depending on guidelines provided by the department of education and economic circumstances. The total value of the schools programme is estimated at R250 million with Mamelodi primary projected to cost R39 million. The schools will be built using steel supplied by ArcelorMittal South Africa.

For ArcelorMittal the Mamelodi project is another crucial pillar in its

Other message that Knight hopes to deliver is that design must consider carbon emissions rather than simple energy use. Some energy sources such as electricity have a very high carbon rating, because of all the emissions from the coal fired power stations used to generate the electricity. So it is better to use other forms of fuels wherever possible, and cogeneration and use of renewable energy are rewarded by the Green Star calculator.

"However, the Green Star tool not only deals with carbon emission, but also the comfort of the people who will occupy the building," says Knight. "For example acoustics is an important issue, as noise can make a workplace unpleasant and have an impact on productivity."

One hot topic in the industry is the new standard on energy efficiency SANS 204 which is coming out shortly. While the draft version contained many positive features such as controlling the amount of glazing in buildings, there were question marks about how it will be enforced and some aspects such as a requirement to insulate the walls in all new buildings. "This, of course, may be justifiable in a climate like Cape Town's, but the cost for a place such as Durban is not reasonable - and the insulation also means that the heat won't be able to get out of the building" says Knight.

"However, if the standard is implemented in an Energy Efficiency Act, it will at least make everyone in the construction industry start thinking seriously about energy efficiency, which has to be a good thing."

Without the database that Australia and other countries have, Arup had to come up with a different way of setting the benchmarks for the rating system. "A computer model is used to predict the energy usage of the proposed building. Then a notional building also has to be modelled, which is a similar shape to the proposed building but has strictly defined glazing and other properties. Then the tool awards points according to how much better the actual building is compared to this notional building."

Computer simulation of buildings isn't yet widespread, and Knight believes that there may be some resistance. "But the top 20% of developers will most likely participate. These modelling tools have become more and more common in the UK, so South Africa won't be too far behind."

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"However, if the standard is implemented in an Energy Efficiency Act, it will at least make everyone in the construction industry start thinking seriously about energy efficiency, which has to be a good thing"
strategy of investing heavily in skills development, training and education. This strategy includes promoting maths and science skills at high schools; an extensive bursary programme for artisans, engineers and other technical skills; and, upgrading the skills of its own employees.

This investment not only ensures that the company has a pool of skilled resources for its own operations, but also contributes towards addressing the skills shortage in the country in general. Under government’s Jipsa programme ArcelorMittal is one of the companies that has committed itself to producing more artisans than it needs for its own businesses.

The company’s CEO, Nonkululeko Nyembezi-Heita explains: “Our core business relies heavily on the availability of skilled people in the scientific, engineering and technological sectors as well as artisans. The key pillar of our skills policy - and that of JIPSA - is to align tertiary education and other institutional training with the actual skills required by both the public and private sectors.”

In a first for South Africa, Mamelodi Primary School will be built using insulated panels technology, which relies heavily on steel as a building material. It can withstand extreme weather conditions, is fire resistant and ten times faster to erect than using conventional building technologies.

**STRAND7 UPDATE AND TRAINING**

A fairly robust Beta version of Strand7 Ver 2.4 is now available for testing. To see what is new and exciting, visit www.strand7.com and click on "What's new in Strand7 R2.4 "A PDF document “Strand7 R2.4 Book” provides worked-out tutorials to explain the newest features.

**Training**

Strand7 has now finalised the dates for two rounds of training, the first being the standard training covering all the existing functionality and the second being an update course to introduce existing users to the new functions. The dates are as follows:

**Course covering current modules**

- 23rd March - full day
  - Strand7 Essentials
- 24th March - morning
  - Strand7 Essentials
- 24th March - afternoon
  - Automesher
- 25th March - full day
  - Structural Analysis
- 26th March - full day
  - Dynamics
- 27th March - full day
  - Non-linear

It may be necessary to swap the 25th and 26th around depending on how many non-structural or out of town users wish to attend - we will advise you of the order after we have received your responses, though at present it seems that the class will largely be made up of local structural engineers, in which case the order will remain the same.

**Course covering new functionality**

- 12th May - full day
  - Strand7 Ver 2.4 functionality
- 13th May - full day
  - Strand7 Ver 2.4 functionality

For more information on the courses please contact Allyson Lawless +27 11 476 4100 or allyson@ally.co.za