

THE ENGINEERING NETWORK PUBLICATION

ISSUE 20 Pg. 10 AVAILABLE IN PRINT, TABLET OR DOWNLOAD DATE: 20 FEBRUARY 2012

## Gold Fields Steel Headgear designed by Hatch receives accolades

The design and engineering of one of the world's tallest steel headgears, as part of Gold Fields' South Deep Ventilation Shaft Deepening Project - with Hatch as the Design Engineer - saw the project team receive a prestigious award at the AMEC Steel Awards 2011.

On February 2012, the Gold Fields' South Deep Ventilation Shaft Deepening Project has received accolades from industry for the design and construction of the new A-frame headgear, which has been installed over the existing ventilation shaft at South Deep in the Witwatersrand.

The Gold Fields project team engaged the services of consulting engineering and project implementation firm Hatch as the design engineer of the project. The project took first prize in the Mining and Industrial category at the Southern Africa Institute of Steel Construction (SAISC) Steel Awards 2011.

The structure, which is currently the tallest steel headgear in the Southern Hemisphere and the second tallest steel headgear in the world was built in order to augment the mine's production capacity, which will eventually see the mine reach a full production rate of around 700 000 tonnes per annum by the end of 2015.

Hatch Africa's role as design engineer for the project entailed an increase in the current headgear's lifting height and capacity such that the full mine could be hoisted from the shaft.

Hatch project manager, William Ransome, who played a key role in the project, says that because the foundation design for the existing concrete headgear would not have coped with the increased load expectations for the new 7.1m tall rock window, the only viable option was to construct a new headgear from steel and erect it over the top of the existing headgear.

Steel Awards Judge, Neil Percival, noted the structure as

being especially impressive for two main reasons: "Steel was the only viable construction material that would suit the complex, continuous construction, tight schedule and extremely exceptional technical and project management, together with the need to successfully execute the work, in accordance with these requirements."

The substructure, which weighs in at 2000 tonnes and is currently the tallest steel substructure in the southern hemisphere at 62 metres high, was designed and engineered by the Hatch project team in conjunction with the Gold Fields' project management team.

"This project has been a journey for all of us that was loaded from the onset. The project team were faced with many challenges, however, they were managed to find the solution for each. During the design stages of the project, it was realised that there were critical aspects to the design of the headgear. Any small deviation would have had a significant impact on the overall structure and the project team managed to ensure that the design was robust and that the structure was built to last."

In addition to the challenges faced in the design stages of the project, the team was also faced with strict deadlines as the installation of the new headgear could only take place during the mine's shutdown period over Christmas and Easter, as erecting the headgear around a working shaft was not an option.

With the steel fabrication completed by Steel Services and Allied Industries and the erection managed by the Gold Fields project team led by Peter Collins, the installation and preparation was completed well in advance of the installation programme, which ultimately required significant planning and integration of the design, the fabricator, the erection team, the mine's shutdown period and the professional team demonstrated by all parties. The project team managed to erect the entire structure in just twenty-eight days.

The first phase of construction, which took place over the

### INSIDE THIS ISSUE

- 50% FARMING WITH GREEN ENGINEERING PG 3
- COGS AND THING THAT GO IN MACHINES PG 7
- PIPE COLLAPSEMENT SPECIALIST PG 12
- ORGANISE YOUR SOFTWARE INTERSPACE PG 15

### AMEC Minproc rebranded to AMEC

With leading engineering and project management consultancy AMEC Minproc will be becoming only AMEC. The rebranding will see the company's name change to AMEC, which is globally recognised as a leader in mining and energy services.

AMEC has operations across 40 countries including the UK, the Americas, Africa and Australia and employs 2300 people worldwide. AMEC is a publicly listed company on the London Stock Exchange and has operations in Australia, Asia, India, mining, engineering and consulting services to the oil and gas, minerals and metals, clean energy, environment and infrastructure markets.

Mal Brown, AMEC's President of Mining and Metals, said: "While we are letting go of the Minproc name, our reputation and experience will remain with us as we embrace the new challenges for the company under the AMEC name, which is globally recognised as a leader in mining and energy services."

Acquired by AMEC in Q4 2009, Minproc has been a key driver of AMEC's midstream growth plans for Australia, Africa and Asia. In 2011, Minproc's revenue was \$1.1 billion, making it the largest revenue contributor to AMEC's global engineering and project management company.

It has successfully completed more than 400 major design and construction projects in more than 20 countries, playing an important role in some of the world's most critical infrastructure projects.

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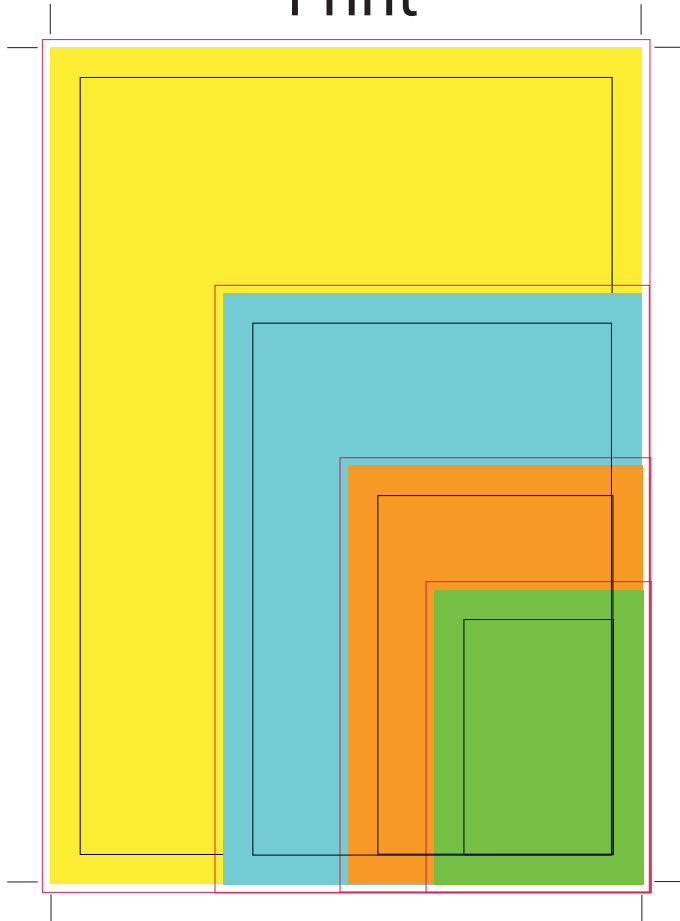
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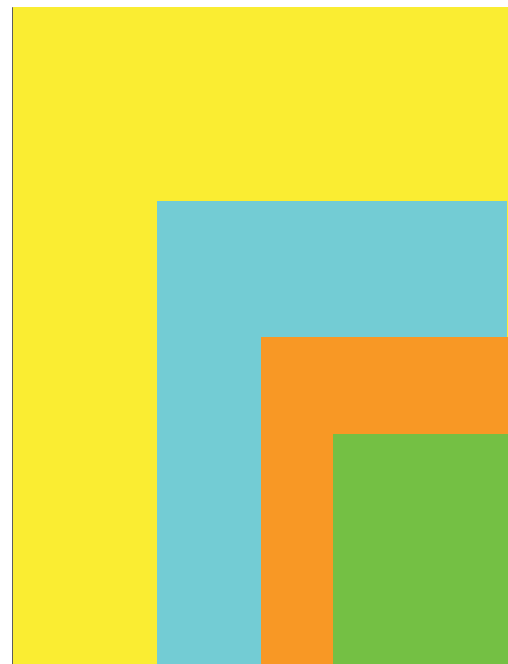
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