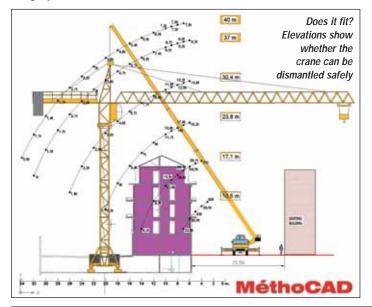
innovations

Virtual reality

French tower crane and formwork planning software MethoCAD is set to launch its latest revision 8.1 which includes three new modules mobile cranes, site safety and virtual reality - giving improved information and 3D graphics.

In addition to being able to see images of the proposed crane in plan and elevation, the new crane module allows the user to check the type of crane needed to dismantle as well as showing the completed building elevations to check the mobile crane's boom length, boom angle and loads.





Like in a video game, users can move in real time through a digital model of the crane and site.

The site safety self training module gives on-screen safety training, using files of dangerous situations already identified by health and safety organisations. Aimed at inexperienced operatives, the programme includes stills and animations to help with the training,

To aid site planning, MethoCAD can help with the positioning of the tower crane and the checks that need to be carried out. A click of the mouse shows the site plan, position of the tower crane and loads at various radii. At no point is any manual data entered by the user which reduces risks of errors. For multiple crane sites, the

software checks that there is no interference when the cranes are in 'free swing' mode. The crane elevations are automatically drawn and any potential clashes highlighted. Perhaps the most interesting aspect of the programme is the virtual reality module which allows the user to move in real time through the digital model and manipulate objects as in video games. Users can sit in the tower crane cabin, move the jib to ensure there are no lifting or visibility problems. There is also a full visual of the site and the user can walk around and manoeuvre equipment to check physical dimensions of equipment and the site.

A scaffolding contractor has designed a façade anchor for scaffolds and mast climbers fixed to a fully cladded steel framed building, where access to the rear of the façade is not practical. The 25mm tie provides a method of securing into hollow section steel structures or RSJs where access is limited, eliminating the need to cut and patch the cladding.

The inventor says that the device, called the 'Jacktie', offers a number of other benefits, including a neat and clean finish on the cladding as the 25mm hole can be covered with a plug. The anchor is also recoverable and can only be tightened or removed with the appropriate key.

Installation begins with the drilling of a

hole through the cladding to the steel purlin behind. Once the Jacktie is in place, a key is used to engage locking pins which clamp into place behind the steelwork. A circular collar is then hand-tightened up to the face of the cladding. A 16mm ring bolt is then screwed into the front of the Jacktie, a scaffold tube can then be passed through the ring, allowing the scaffolding to be attached to the building using the standard procedure for physical ties as detailed in BS5973.

Designed and tested to BS5973 section 2 paragraph 9.7.1 (e), the Jacktie has a safety factor in excess of 5:1. Measuring 25mm in diameter and 190mm in length, it has an inwards/outwards capacity of 6.25kN. Other sizes are currently under development.

Neither poly nor solid

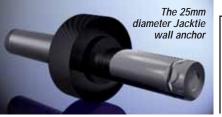
A North American based tyre company MITL Brawler is developing a flexible solid tyre for use with aerial lifts. The company says that it is working with a number of manufacturers to install its 'Solid-flex' range of tyres on new and existing aerial lifts. The tyres can directly replace a pneumatic or poly/foam filled tyre on both scissor and boom lifts.

The tyres incorporate a honeycomb cushioning ring between the steel rim and the tread pattern. This provides the same or better rigidity than a poly filled tyre, while also offering some of the cushioning effect of a pneumatic tyre. The net effect is a smoother ride, less strain on the drive train and for rough terrain

applications, a self clearing tread pattern that retains traction in soft muddy conditions where large rim, thin tread solid tyres typically clog-up. With a square edge and, according to the manufacturer, superior stiffness and wear characteristics compared to a filled pneumatic tyre, it could enhance stability allowing the manufacturer to reduce weight or machine width. The tyres are also available with a smoother tread and can be supplied with a white/grey non-marking compound.



A Solid-flex rough terrain tyre currently used on skid steers will soon be available for aerial lifts.





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