Safety depends on attitude

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The CRCCI project will identify:

- Which management and supervisory positions with a construction company/project are critical to safety performance (safety critical positions).
- What types of competencies/skills/knowledge/behaviours are required to shape the understanding, attitudes, behavioural competencies, norms and commitment of line management and supervision to site/project safety and safety culture.
- What type of training packages and learning tools are in place and their effectiveness to individual site and industry OHS outcomes and safety performance.

Funded $650,000 in cash and kind, the project (as with CRC projects generally) has a minimum of two industry partners and two research partners.

Cipolla is particularly pleased about this level of NOHSC involvement. "Ultimately we want this research to lead into the creation of an industry standard for safety critical positions and required competencies."

Eco-cement is the winner

TecEco's John Harrison believes his invention could potentially turn the problem of global warming around.

JOHN Harrison, managing director of TecEco, has won an episode of ABC TV's The New Inventors broadcast last month.

Harrison won with his company's product eco-cement which is a blend of reactive magnesium oxide with conventional cements like Portland cement. The invention is of interest because eco-cements set by absorbing CO_2 out of the air.

The Hobart-based inventor hopes to make his magnesium oxide using a kiln he has also invented which combines heating and grinding for efficiency, has no emissions and is powered by solar or waste energy. Magnesite is heated in a kiln to around 650°C to produce reactive magnesium oxide.

The reactive magnesia powder from the kiln is blended with a pre-determined, but flexible amount of Portland cement and aggregates to make an eco-cement which in porous materials absorbs CO_2 forming stronger fibrous mineral carbonates that bond together aggregates many of which can be wastes.

Eco-cement can handle more industrial waste than other hydraulic cements because it is less alkaline minimising the solubility of heavy metals and because it does not react with wastes jeopardising the strength of the concrete.

Portland cement concretes cannot utilise huge amounts of waste because they are too alkaline leading to disruptive reactions.

Hammer head tower crane

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construction consists of a mixture of Ritek lightweight hollow core walls filled with reinforcement and poured concrete, precast concrete panel walls and some external steel frame and post construction walls with infill cladding of corrugated roof sheeting. The slabs are reinforced concrete.

Apartment designs vary with some two-level, mezzanine level and one level. Apartments are accessed by external corridors and efficient building design has necessitated only two lifts.

The site was formerly used for manufacturing purposes and was bulk excavated to a depth of about 3m across its entirety. The spoil was a mix of basalt rock and creek silt organic matter.

Before bulk excavation, perimeter piling was done around the whole site to support adjoining developments. A series of 150 contiguous reinforced concrete piles ranging in depth from 12m to 18m and with varying diameters depending on location and minimum bearing requirements were drilled.

Access to the building site is on both the Dank and Philip Street frontages where loading zones are located.

The Liebherr tower crane has been operating long, 10 hour days, six days a week. A crane schedule with a timetable of bookings is the key to building efficiency.