

Plastic formwork proves its worth for constructing walls

A Melbourne company has come up with a range of innovative, lightweight concrete formwork solutions that are equally at home on commercial and housing projects. ICF Contracting is developing markets for two formwork products – a unique, reusable plastic formwork system and a lightweight styrene system.

The plastic formwork system recently came into its own on a 23-level office project in William Street, Melbourne, where crane access through the roof wasn't available and the handling of traditional timber formwork would have been almost impossible in the confined internal spaces.

More than 4,000 square metres of the ICF Contracting plastic formwork was used for the 85 metre high central lift core, duct core and stairwell.

Peter Brown, site foreman for the building contractor, Oceania Universal, says the system was the ideal solution under the circumstances. "There was no way we could have used conventional formwork inside this particular building, so the plastic system was magnificent," he says. "It was quick and clean and easy to handle. We also had a special concrete mix developed. Everything worked really well."

The ICF Contracting system comprises 200mm wide, locally manufactured plastic planks that are connected via specially designed, US-made plastic ties. The planks can be cut to length on site with a hand-saw.

"The boards are lightweight, easy to handle and can be reused up to 10 times," says ICF Contracting Managing Director, Ari Schupak. "I don't know of anyone else in the world that offers a system like this."

With the system proven in the commercial market, Schupak says he's now looking to expand into the domestic housing market, where he says the plastic system can be used in tandem with the company's styrene formwork system.

"More and more developers and builders are considering concrete walling as an alternative to brickwork, and these formwork products are ideal for in-situ concrete walling applications," he says.

"The plastic boards are an ideal formwork solution for the exterior face of the walls, as they can be easily stripped away for a clean finish." "For the interior side, either the plastic or styrene systems can be used. The beauty of the styrene formwork is that it remains in place to provide in-built insulation."

In North America, styrene systems are increasingly popular as a two-in-one formwork and insulation solution. Once the concrete walls are poured, the styrene remains in place and is either sealed and rendered or covered by a stud wall and cladding.

Schupak says the styrene system is also ideal for a range of domestic and commercial construction applications such as retaining walls, firewalls, holding tanks and basements.

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