Precast Walls for Industrial and Commercial Buildings

By Brian Ó'Murchú

Precast walls are increasingly popular because of their versatility, speed of erection, quality of finish and increased security and fire safety features. There are a number of types on the market, suitable for use with both concrete and steel structures. The side walls of industrial buildings are typically built to a height of 2.5 metres above finished floor level. However, a notable trend is the use of 'full building height' precast walls which are steel reinforced and therefore highly resistant to breaking and entry and malicious damage.

The new 'Fashion City' development in Ballymount industrial estate, located just off Dublin's M50 motorway, is a combination of precast wall and steel frame construction. When completed the development will provide offices, warehousing and showrooms for leading fashion related brands. The Concast Precast Group are currently installing precast walls in approximately 24 units, primarily for security and fire safety reasons. The walls are installed between columns - within the column web. Adjacent units are separated by precast concrete 'firewalls'. To achieve the required 'firewall' rating, the web of the steel columns between adjacent units is grouted with concrete.

During manufacture, walls units are cast on a steel mould face which produces a smooth, clean, self-finished surface. The self-finished surface is typically painted internally and concealed by cladding panels externally. A similar panel is produced by Flood Flooring, based in Oldcastle Co. Meath.

A major extension to the nearby Irish Distillers factory (Naas Rd. Dublin) also features precast concrete walls. The new building, which is manufactured and installed by Oran Precast, is an 'all precast structure', with precast walls used in conjunction with concrete columns and beams. The facility houses large quantities of flammable materials and is designed to achieve a four hour fire rating.

In this case, the precast wall panels are stacked five units high on the outer face of the precast columns. The ground wall panels have been designed as beams to carry their own self-weight and the weight of the upper panels and, are supported at the column foundation pads. This support system eliminates the need for strip foundations except where door opening occur. Ground panels also act as retaining walls because of the difference in ground level inside and outside the building.

Architectural Cladding by Techrete Ltd.

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Georges Quay - Dublin

Precast Walls
by Concast Precast Group

Precast concrete self-finishing wall panels are also available with both integral and applied finishes. Dublin's Georges Quay development, which features a cluster of five new tower buildings, is cladded in a range of re-constituted stone panels supplied by Techrete Ltd. Although significantly higher than the surrounding buildings, the scale of the five towers is considerably reduced by the combined effect of masking by neighbouring buildings and by the clever use of mild-coloured reconstituted stone panels which merge with the lighter-coloured and contrasting glazing elements.

Precast Walls by Concast Precast Group

Precast Walls by Oran Precast Ltd.