

High-tech construction

Precast concrete components have been used for decades to improve construction productivity. Now, even the making of these precast parts has become more efficient, in high-tech, automated Integrated Construction and Prefabrication Hubs.

TRADITIONAL METHOD

Precast concrete parts are traditionally made in precast yards or sites, with most processes done manually.



1 Workers assemble the mould in the required shape.



2 They fix steel wires known as rebars, to form the framework for casting.



3 Concrete is poured into the mould and manually smoothed out. The component is left to dry before being removed from the mould and stored.

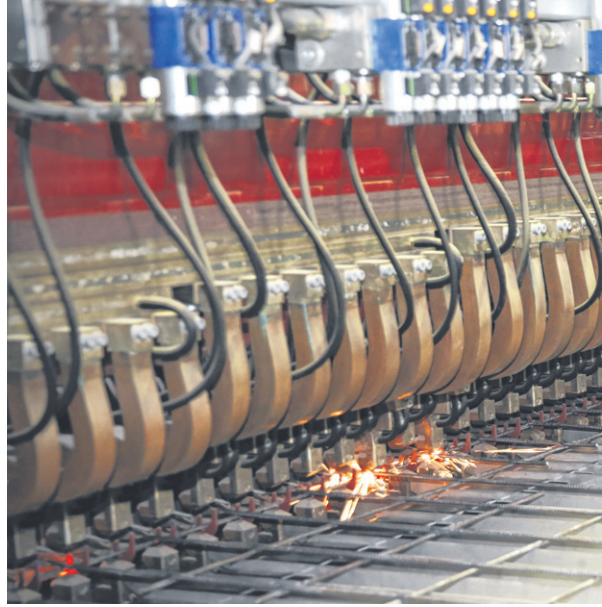


NEW METHOD

Compared to precast yards, multi-storey Integrated Construction and Prefabrication Hubs take up less land and produce more components. The use of mechanisation means that they need 50 to 70 per cent less manpower.



1 Using digital data from the design plans, a machine plots the required shape onto a pallet. The mould is placed on the pallet according to the plotted lines.



2 Steel mesh is produced by an automatic mesh welding machine.



3 The mesh is placed inside the mould and concrete is poured in. The mould is vibrated by the machine to spread the concrete evenly.



4 The concrete panel is put into a curing chamber to harden.



5 A machine smooths the precast surface.



6 The completed component is removed from the mould and automatically transferred to the multi-storey precast storage rack.