

Project Spotlight



WM MORRISON - Coldstore Corby, Northamptonshire, UK

Design and Construction of a 11,794m² Steel Fibre Reinforced Concrete (SFRC) Ground Floor Slab

Twintec has designed and installed a jointless, steel-fibre reinforced concrete (SFRC) ground supported floor slab at a new cold store for WM Morrison in Corby, working closely from the early stages with main contractor, Clugston Construction, and the consulting engineers AWT Partnership.

The placement conditions were particularly challenging as the floor slab was cast on top of heavy duty insulation and within the confines of insulated wall panels which prevented direct discharge of the concrete from mixer trucks and necessitated concrete pumping.

This also ruled out the use of the Laserscreed and Topping Spreader and required extremely high levels of skill and experience with flood pour techniques to achieve the quality demanded by the client and the FM2 special flatness tolerance.

Added to these challenges, a tight programme required that we utilise two production teams working side by side; a total of 34 skilled Twintec operatives worked simultaneously on the project utilising 630m³/day of concrete to cast up to 3300m² per day working to FM2 Special flatness tolerance. An independent survey of the floor confirms that the results for flatness are outstanding.

The quality and consistency of the concrete was of prime importance and Twintec in-house technicians together with Hanson Premix technical staff developed the most appropriate mix design and Hanson displayed outstanding commitment to the project to ensure that they delivered the goods consistently.

Twintec produced a 200mm-thick, ground-bearing, jointless, SFRC floor slab, using C28/35 concrete reinforced with 40kg/m³ of AFT 1/50 undulated steel wire fibres. The surface of the floor was finished with natural coloured Twintop dry-shake topping applied by hand. The finished floor slabs were cured using Twinseal 90, a combined curing agent, dustproofer and surface sealer, giving the floor a smooth, durable surface with an abrasion resistance of AR1 in accordance with BS8204 Part 2.

Project Data

Application Type:	Coldstore	Fibre Type/s:	AFT 1/50
Main Contractor:	Clugston Construction	Fibre Dosage:	40kg/m ³
		Total Area:	11,794m ²
Consultant Engineer:	AWT Partnership	Slab Depth:	200mm
Concrete Supplier:	Hanson Premix	Completion Date:	March 2006

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