



Southampton Container Terminal

Steel Fibre Concrete

Sika Concrete System:

Fibre Reinforced Concrete

Client:

Pantalver / Associated British Ports

Contractors:

Raymond Brown Construction

Concrete Supplier:

Hanson Premix

Southampton Container Terminal

Sika, working in close partnership with Hanson Premix, Southampton plant, has been supplying high grade, steel fibre reinforced concrete, to Raymond Brown Construction for use in their latest contract for Pentalver Transport, at Southampton Docks. Continually needing to adapt to the ever increasing volume in containerised transport worldwide, Pentalver Transport, has recently increased its footprint by some 23 acres. The deep-water port, uniquely with 'double tides', handles many of today's largest container ships and in turn the largest containers. Container service providers, Pentalver are leasing the site from Associated British Ports. Hanson Premix, using **Sika** admixtures were chosen to supply the concrete for this new container storage area.

The concrete mix for the 23 acre slab was critical, as it would have to withstand continual vehicle and container movements on top of the stacking and storing of the containers themselves. **Sika** and Hanson technical staff, with the assistance of Propex Concrete Systems, designed a reinforced concrete that had high flexural and compressive strength, good freeze/thaw resistance, with high abrasion qualities and capable of coping with the aggressive marine environment.

A C40 concrete mix was specified, incorporating Novocon FE1050 steel fibres and **Sika Fibrepack** polypropylene fibres, to provide increased flexural toughness and resistance to early and long term cracking. Granulated blastfurnace slag (GGBS) at 40% was also incorporated in the mix to further increase the durability of the concrete, together with **Sikament®-10** superplasticiser for water reduction.

Starting in August 2007, Hanson Premix supplied main contractor Raymond Brown Construction Ltd, with up to 1,100 cubic metres of the concrete per week from



their Southampton plant two miles from the site. Now nearing completion, the total supply has been in the region of 26,000 cubic metres. With its double loading plant and 90 cubic metre an hour capacity, Hanson were more than capable of supplying this project whilst still servicing their other customers.

Sika and Hanson technical staff have been closely monitoring the project throughout, ensuring a good finished product and a close working relationship with the client.

Mark Watts, district sales manager for Hanson Premix said: "This has been a great project for ourselves and **Sika**. Working together we have been closely monitoring the project throughout, enabling us to meet all of the project's challenges. Hanson plant supervisors Martin Glasspool and Steve Briggs worked extremely hard to produce the mix and volume of concrete required throughout the project."

Sika Concrete Systems

Specialist Concretes

- Corrosion resistant concrete
- Micro-silica concrete
- Underwater concrete
- Early strength concrete
- Self-compacting concrete

Admixture Range - premix and precast concrete

- Concrete admixtures
- Mortar admixtures
- Grouting admixtures
- Powdered admixtures

Watertight Concrete

- Solutions for basements and swimming pools
- Watertight jointing systems
- BBA certified
- 40 year track record



For further information or to discuss your project requirements
E-mail concrete@uk.sika.com or telephone **01707 394444**

Sika Limited, Watchmead, Welwyn Garden City, Herts, AL7 1BQ
Tel: 01707 394444 Fax: 01707 329129 e-mail: concrete@uk.sika.com www.sika.co.uk