

PROJECT REFERENCE



Shotcrete Repair to Headstock Beams - Siam Seaport, Au Udom, Thailand.

Hammersmith were involved in the development of a concrete repair solution for the approach bridge headstocks at Siam Seaport's Au Udom facility for almost two years prior to the award of this project, working closely with the clients Engineer, Messrs. Sindu Maunsell and specialist material supplier Sika (Thailand) Ltd.

The primary mode of deterioration was considered to be *"crack propagation due to torsion fatigue of the cover concrete"* requiring that the headstock repair material incorporate 1% by volume "High Performance Polypropylene Fibers of a length not less than 50 mm".

Hammersmith sourced and imported a fiber that achieved the technical specifications and, based on the requirement that the fibers be batched and mixed on site in small volumes, proposed the use of a small volume wet shotcrete process machine.

An Allentown POWERCRETER Magnum was subsequently imported for the repair project allowing for accurate on site batching of the HPP fibers and pre bagged repair mortar.

Isolating the headstock being repaired was also a major challenge due to the 24hr/day operation of the approach bridge. This was over come by the design and fabrication of two mobile "self jacking:" baily bridges that were able to span over three adjacent headstocks, thus isolating the middle headstock from direct



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