



"BBV Systems contributes to expedited critical path for major precast works and significant budget savings for Port Botany Port Expansion Project"

**B** BV Systems Asia, a wholly owned subsidiary of the Bilfinger Berger Group specializing in post tensioning, geotechnic's, and concrete reinforcing systems was awarded the supply contract for prefabricated reinforcing for "Port Botany Expansion Project" by main contractor "Baulderstone - Jan De Nul Consortium".

The supply contract of USD16.5 million included over 10,000 tonne of overseas prefabricated reinforcing for the construction of 1,850 metres of new wharf frontage. The wharf consisting of over 200 precast counterfort units measuring 15m wide, 20m high, 9m long and utilizing approximately 47 tonne of reinforcing each were constructed at an onsite precast yard.

Services under BBV's Supply Contract included a design element with detailed workshop drawings, bar bending schedules and delivery to site of the cut and bent bars semi prefabricated into reinforcing cages including mechanical splice couplers. The cages, prefabricated in Thailand in an ISO9001:2008 and ACRS certified factory were broken down into manageable sections to facilitate shipment in 40' open top ocean going containers. On site technical support to assist with cage assembly was also included in the package.

Two key factors contributing to BBV's success include expedition of the construction program critical path by significant reduction of rebar cage installation time (9 months in total) and significant budget savings by extending a fixed price for rebar cages for the duration of entire works.

The original production schedule for pre casting counterfort units was estimated at a maximum of five per week over 23 months. This was expedited to 6 and sometimes 7 counterforts per week at the height of production. It has been acknowledged by the client that BBV's innovative prefabrication concept and quality of rebar processing works significantly contributed to reducing the production schedule to only 14 months overall.

Additionally BBV was able to fix the current price of reinforcing steel from commencement of the project for the entire contract period even while the cage elements were still under design. Currency hedging initiated by the Bilfinger Berger Treasury Department also contributed in securing a favorable exchange rate between Australian and US dollar.

Other notable projects that BBV Systems have been involved in include the Sydney Cross City Tunnel, Brisbane NSBT Bypass Tunnel, Golden Ears Bridge in Vancouver and OK Tedi Mine in Papua New Guinea.

## **BBV SYSTEMS CO LTD**

6th Fl., MD Tower No. 1. Soi Bangna-Trad 25, Bangna, Bangkok 10260 t. +66 (0) 2769 5699 f. +66 (0) 2769 5690 michael@bbv-systems.co.th













## 'STEELING' THE SHOW

ith more than ten years of experience within the industry, Concrete Reinforcement Services are a steel fixing company able to deliver cost and time efficient solutions to a range of projects throughout Australia.

Having worked on a number of prolific projects, such as Sydney's M7, the Parramatta-Chatswood Railway and the Lane Cove Tunnel, Concrete Reinforcement Services were also recently involved on the \$500 million Port Botany Expansion Development.

Encompassing an additional 1,850 metres of extra berth length, through reclamation of 63 hectares of land, five new shipping berths, dedicated road and rail access, as well as a public boat launching ramp and parking, the significant Botany expansion is expected to almost double the current capacity of the Port.

Noel O'Neill, Director of Concrete Reinforcement Services, said that throughout their involvement, their professional team were responsible for carrying out all of the steel fixing on the Port's counterforts, walls and buttresses, which required 10,000 tonnes of steel and 6,000 tonnes of steel in the crane rail and cope beam.

"A unique aspect of the product we used whilst working on the Port Botany Expansion development, was that we directly imported the steel, already pre-welded and spliced, from Thailand," Mr O'Neill said.

"These pre-fabricated steel structures were extremely time effective for the project in the fact they greatly enhanced and facilitated the installation process," he said.

Given the significant size of the development, Concrete Reinforcement Services did face a number of challenges whilst working on the project.

"Our biggest challenge was that we were required to install over 350 tonnes of steel every week, which was an immense scale and as a result, created a lot of pressure for us," Mr O'Neill said.

"However, using our industry expertise and professionalism, our committed and driven team were able to deliver successful results and a quality product for the client," he said.

Based on the recent success of the Port Botany Expansion Project completion, as well as their pioneering steel installation techniques and product range, Concrete Reinforcement Services will continue to remain at the forefront of the steel fixing industry.

Concrete Reinforcement services have also just won a tender to work on Thiess' Hunter Express Alliance which will require 6,500 tonnes of steel to be installed.

## CONCRETE REINFORCEMENT SERVICES

Contact: Noel O'Neill

- t. 0410 699 066
- e. crsreo@bigpond.net.au