



MELBOURNE CEMENT FACILITY SILO

Structural Systems (Construction) based in Melbourne Victoria were contracted to work on the new Melbourne Cement Facility Silo. This state of the art cement storage silo is located at 26 South Wharf Lorimar Street Port Melbourne with a capacity of 35,000 tonnes, which will be the latest addition to Melbourne's largest supplier of cement. The facility currently supplies 80% of the cement required to produce the concrete for over five ready mix companies. This new Cement Silo will have the ability to load three (3) tanker trucks within its perimeter at one time.

The silo has been designed by Shedden Uhde a leading designer within this field. Some technical points

- Capacity 35,000 tonnes
- Height 57 metres
- Diameter 30 metres
- Wall thickness 900mm reducing to 450mm
- 535 Tonnes of reinforcement
- 130 Tonnes of Post tensioning
- Cubic Metres of concrete



Structural Systems successfully bid the project using an in house Slipform System. This coupled with the BBR multistrand post tensioning system was seen by the client as the best solution for a difficult project with a tight program.

Pouring of the concrete, fixing of the reinforcement and installation of the post tensioning ducts and castings was under taken over continuous 24 hour pouring cycles reducing the need for unsightly construction joints in the external wall.

The silo has 72 No 15.2mm 27 strand hoop tendons at 1m centres. The hoops are broken into four segments and stressed through 4 buttresses.

Structural Systems has developed computerized high speed strand pushers enabling our post tensioning installers to work in an efficient and safe manner from mast climbers mounted on all four buttresses. 72 No 15.2mm 27 strands were installed each at a length of 102 metres, this took a total of 12 days.

Structural Systems with its experienced and motivated workforce completed the project on time and within budget. With several more similar silos planned throughout Australia, Structural Systems are looking forward to continuing the successful SSL Slipform- BBR partnership.



Project Data Sheet

Year:
2006/2007

Location:
Port Melbourne, Victoria

Client:
DECCO

Division:
Structural Systems
(Construction) Pty Ltd

Scope:
Supply & Install Post-Tensioning

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