



Description of the work :

The Melbourne City Link is one of the most important metropolitan road developments ever undertaken in Australia. The project provides a link between the Tullamarine, Westgate, and the South Eastern Freeways. Located on the Western Link section of the project the Bolte Bridge carries six lanes of traffic.

This main river crossing, is a 486m structure built insitu balance cantilever has four spans, 71-172-172-71m The superstructure comprises two independent single cell, variable depth, prestressed concrete box girders. The main piers are monolithic with the deck, supported by bearings at the other piers. Movement joints are provided as the deck abuts the adjacent viaduct spans.

Freyssinet mission :

The contract works completed by Freyssinet Australia includes :

- Supply, installation and stressing of stress bars.
- The post tensioning quantity of 700 tonnes, is found in the top flange. These tendons are Freyssinet C Range 19C15 system and installed during segmental construction. A quantity of 160 tonnes is located in the bottom slab of the box girder and stressed after the closure pours between the cantilevers are complete. These continuity tendons are Freyssinet C Range 19C15 and 13C15 system. A typical 5 day cycle on each traveller was achieved. This included the installation and stressing of 2 No. 19C15 tendons the day after each segment pour, the longest tendons being 220m.
- Other specialist services include heavy lift of the form travellers. This involves lowering of travellers off completed cantilevers and lifting into position using L50 heavy lift jacks. Speeds of up to 17m/hr were achieved during these operations. Of particular interest is the heavy lifting and lowering of the temporary steel props used to counteract the out of balance loads during the cantilever construction. Due to the limited access, use of cranes was not possible. This required the design of a unique L50 heavy lift system.

Companie(s) :	Baulderstone Hornbrook
Owner :	Transurban
Engineer :	Hyder - CMPS
Engineering consultant :	Cardno MBK

Subsidiary(ies) :	Freyssinet Australia
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End of works :	01/2000
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