Sheahan Bridge Duplication

Australia, New South Wales

Work / Activity 1
Prestressing / Tendons

Companie(s) :	JV with Fulton Hogan
Owner :	Roads and Traffic Authority (NSW)
Engineering consultant :	Taylor & Herbert
Subsidiary(ies) :	Freyssinet Australia
Beginning of works :	03/2008
End of works :	04/2009

Description of the work :

The duplication and upgrade of the Hume Highway between Melbourne and Sydney is one of Australia's largest road infrastructure projects. As part of this, the road bridge known as Sheahan Bridge located at Gundagai, over the Murrumbidgee River and associated floodplain required duplication. Austress Freyssinet entered into a Joint Venture contract with Fulton Hogan for the construction of the main river crossing, a 193m length structure built cast-in-situ balanced cantilever with three spans, 53m-87m-53m. The deck is a prestressed concrete box girder with a depth varying from 2.40m to 5.00m and a top width of 10.80m and a soffit width of 6.00m, supported by two piers. The deck consists of a single cell box girder with a minimum top flange thickness of 250mm and a minimum bottom flange thickness of 250mm. The deck was constructed by balanced cantilever cast-in-situ segments 3.95m length, with cantilever and continuity 13C15 tendon post tensioning (approx. 60 tonnes).

Freyssinet mission :

Freyssinet Australia was responsible for - • the design, delivery, installation and operation of the two Form Travellers • precamber design for balanced cantilever bridge construction • the supply and installation of the post tensioning to the balanced cantilever bridge • supply and installation of expansion joints Freyssinet Australia also worked as an integrated team providing - • scope for Joint Venture • design input for permanent works • assistance with deck construction Additionally we provided some equipment and assistance with the casting yard; for the precast girders to the balance 1.20km length bridge over the floodplain.