



Companie(s) : Freyssinet Australia
Owner : Network Alliance / Sydney Water
Engineering consultant : SASTTI

Subsidiary(ies) : Freyssinet Australia

Beginning of works : 04/2010
End of works : 12/2010



Description of the work :

Following several inspections and investigations by Sydney Water, it was apparent that the existing steel roof of the reservoir was in a poor condition and needed to be replaced. Schedule was important to the client to ensure that water was available to the local community ready for the high demand period at Christmas / New Year. Freyssinet was awarded the contract for procurement and construction based upon drawings issued by Networks Alliance.

Freyssinet mission :

There were several key phases of the project – • Procurement and fabrication • Demolition • Structural erection of the roof frame • Cladding of the roof with aluminium sheeting • Painting of the tank internal steel shell • Waterproofing of the concrete tank floor Aluminium components (purlins) were procured from China due to cost and material availability in Australia was difficult because of the aluminium grade specified. Structural steel was fabricated and galvanised in northern NSW to detailed drawings by Freyssinet design subcontractor Demcox. Demolition was a critical safety area of the project and a licensed demolition contractor was retained for this activity. Adding to the complexity of safely demolishing a heavily corroded roof structure was the presence of lead paint on the roof steel. A combination of chemical stripping and cold cutting with hydraulic shears was used to prevent the need to use any hot work techniques with the lead coated steel. Erection of the roof frame and purlin installation was self performed by Freyssinet crews. A roofing contractor was retained to supply and install the Lysaght roof cladding along with walkways, hatches and safety anchor points for fall protection. The internal tank shell was grit blasted and repainted with a 750 micron Jotun Tankguard 412 system. Near the end of the project a variation was issued to Freyssinet to waterproof the concrete tank floor due to a history of leaks during tank operation. This was achieved using a combination of rubber expansion joints, hot bitumen and a liquid rubber membrane system.

