



CASE STUDY: Civilbuild

PRE CAST CONCRETE ABUTMENT GROUTING

BACKGROUND

Civilbuild are a family owned Civil Construction Company based in Newcastle NSW specialising in Pile Driving & Heavy Construction designing, building and installing pre-cast pre stressed headstocks, panels, piers and foundations.

JOB DESCRIPTION

Civilbuild were contracted for a grouting project at a newly constructed boat ramp on the NSW Central Coast at short notice. The boatramp is located in Cabbage Tree Harbour within The Wyong Shire Council and is the districts only ocean access ramp catering for a growing number of local, tourist and other vessel launches.

The project commenced in April 2014 and is scheduled for completion in May 2015. The main double lane boat ramp and beach ramp are receiving full upgrades with provisions for safe, low and high tide launch capacity. An existing retaining wall will be replaced with a superior rock wall structure as well as the relocation of sewer mains and installation of a gross pollutant trap with a storm water outlet structure.



ANTEC SOLUTION

The ChemGrout CG570 Diesel Hydraulic Twin Skid Grout Pump was supplied on a HIRE basis to Civilbuild due to its simplicity of design, ease of use and reliability.

Working within tight time frames at low tide, the machine was placed on the beachfront for grouting of eight pre cast concrete abutments, sealing the galvanised steel reinforcement bars that connect to the concrete pile headstocks. Each of the 8 abutments were grouted with 400 litres of grout pumped through the 1" hoses fitted with ChemGrout flowable couplings to a depth of 300mm.

A SIKA WT water resisting crystalline watertight 100g admixture was added to each 6 bag batch to provide an impermeable barrier for the concrete, sealing any potential migratory passages of water through the structure which over time could contribute to corrosion. Ambient temperature when placing grout was 29oC and the water temperature was 18.4oC. Grout work time was 30 minutes which allowed enough workability. The density of the material is 2115kg/m³, with a water addition rate of 2.6L per 20kg bag, flowable consistency.



ABOUT ANTEC

Antec is a manufacturer and distributor of a wide range of products to the mining, minerals processing and infrastructure industries in Australia. Antec are the exclusive distributor of the ChemGrout range of grout pumps.



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