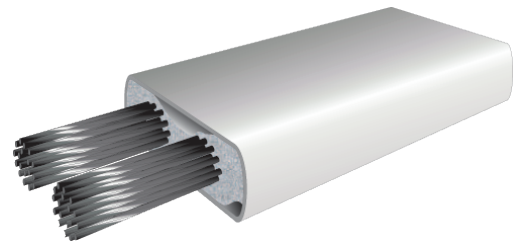


Case 03 Grouting and protection of post tensioned cables

A major concern with existing bridges and some post-tensioned floors has been quality of grout and protection of tendons. A properly grouted duct will protect tendons from corrosion by providing an alkaline environment around and between the tendons. However, such factors with the grout as poor flow, segregation, air entrapment combined with procedural problems such as maintaining pumping pressure, protection of end plates and correct choice of ducting have led to many challenges facing the industry.

Voids in ducts

The best way to ensure complete filling of the ducts and hence protection of the tendons is to use a top quality grout **Conrep.303 HFG**. The favored option is to use a combined colloidal mixer and pump with a constant pressure monitoring system. This ensures a steady flow of grout with a measured quantity of water without segregation and without air entrainment.



Post tensioned cables

Solution 03

Grouting and protection of post tensioned cables

Recommended products



Conrep.303 HFG



Conrep.303 HFG is a ready to use, free flowing, and blended cementitious powder. It requires only the addition of water in a high shear mixer, to produce a free flowing grout.

Conrep.303 HFG is a high strength, highly fluid, controlled expansive grout with superior dynamic load stability. It has been designed for grouting post tension cable. **Conrep.303 HFG** provides corrosion protection for highly stressed steel cables, rods and many other systems. This unique shrinkage compensating system in **Conrep.303 HFG** guarantees controlled positive expansion in all directions.

The positive expansion of **Conrep.303 HFG** remains constant throughout the life of the grout.



Mixing

Mix 20 kg **Conrep.303 HFG** with 6 to 6.8 liters of cool potable water. Depending on the quantities to be prepared, a drill and paddle can be used for small applications or a high shear mixer and slow speed agitator for large applications, place into the mixer most but not all of the required water. Start mixer, then slowly add **Conrep.303 HFG** and continue mixing after all lumps have disappeared, add remaining water. Continue to mix for a total of 3 to 5 minutes or to uniform consistency. Mix only the amount of grout that can be placed in 20 to 30 minutes.

Do not mix by hand. Ideal application temperature is between + 5°C and + 35°C. If the application temperature is higher than 35 °C, make sure to use cool water to keep the mixed grout temperature below 30 °C.

Injection

Place the **Conrep.303 HFG** in accordance with guide specification for post-tensioning structures. Contact our technical department for more details.