



Post-Tech® PTI Impregnation System

Corrosion Protection System for Grouted/Bonded Post-Tension Tendons

DESCRIPTION

The repair and protection of grouted/bonded post-tension tendons can present unique challenges when a corrosion risk is present due to the presence of voids and defective or contaminated grout. The Post-Tech PTI system has been specifically engineered to mitigate or avert corrosion in bonded post-tension tendons by taking advantage of the naturally occurring interstitial spaces in stranded high strength steel tendons. The Post-Tech PTI corrosion protection material is applied under pressure and travels along the length of the strand while also penetrating into the grout surrounding the wires.

The foundation of the Post-Tech PTI system is a formulated low viscosity dual action hydrocarbon silicon polymer resin. The anti-corrosion Post-Tech PTI impregnation material has a greater affinity to steel surfaces than water and thus displaces moisture from the steel surface to form a protective barrier on any exposed steel surfaces. Further, the impregnation material permeates between the wires of the strand to impregnate the grout surrounding each strand to provide an additional barrier to moisture and oxygen.

The Post-Tech PTI impregnation process can be completed from the end anchorage or from intermediate locations along the length of the tendon. Experience has shown the Post-Tech PTI material can flow through the interstitial spaces at least 250 ft (75m) along the length of a tendon from a single entry point.



Post-Tech PTI impregnation material mitigates corrosion on post-tension strands (right)



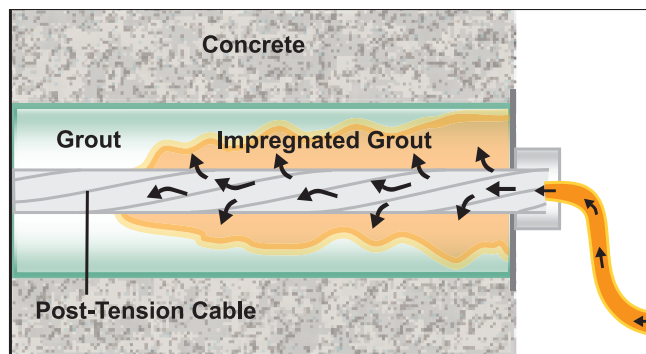
Salt spray testing on steel plate with Post-Tech PTI treated section (right)

APPLICATIONS

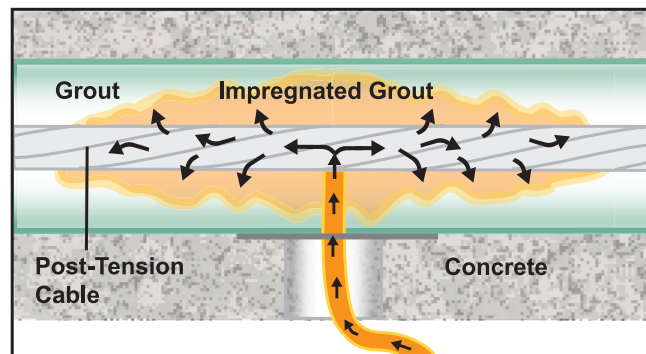
- Protecting high strength steel strands in bonded post-tensioned bridges and other post-tensioned concrete structures
- Grouted stay cables
- Suspension and hangar cables
- Prestressed concrete structures

FEATURES AND BENEFITS

- **Low viscosity** - travels under pressure in interstitial spaces along the length of the tendon
- **Film forming** - provides a protective barrier to exposed steel surfaces
- **Moisture protection** - penetrates into grout creating a zone of impregnation around the steel



Impregnation from end of exposed tendon



Impregnation from midpoint location



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Physical Properties	
Colour	Creamy Amber
Density	7.68 lbs/gal (920 g/L)
Flash Point	144 °F (62 °C)
pH	9 - 10



Post-Tech PTI impregnation occurring through the end cap of a post-tension tendon



External tendons being impregnated with Post-Tech PTI material



Opening in post-tension tendon verifying presence of Post-Tech PTI material around the strands

ABOUT VECTOR

Vector Corrosion Technologies takes pride in offering technically advanced, cost effective corrosion protection solutions to extend the service life and improve the durability of concrete and masonry structures around the world. Vector has earned numerous project awards and patents for product innovation and is committed to a safe, healthy and sustainable environment. For additional information or technical support, please contact any Vector office or our extensive network of international distributors.

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