



FAQ

Listed below are frequently asked questions and answers regarding CCI's Retrowrap products and services.

1) Please explain in detail how the gel works (chemical proposition).

The inhibited gel is used in combination with the wrap where the outer wrap panel forms a watertight environmental barrier. During installation, the hydrophobic elements within the gel repel water creating an anaerobic state inside the wrap. The inhibitor contains a proprietary blend of O² scavengers, biocides and reactive components which pacify the iron oxide on the pile surface exactly the way inhibitors function “inside” pipelines. However, in our case, the performance is enhanced by the induced hoop tension within the wrap and the fact that the inhibitor is held static within the gel against the pile surface.

2) Do you have any references from independent inspection authorities, for example Lloyds or DNV?

We have a test report from ITI Laboratories commissioned by Shell, Exxon, Chevron, Amoco and Texaco to test four methods of retrofit riser protection. 3rd party independent testing institutes are used in testing and developing the wrap technology.

3) Retrowraps can be easily removed for regular checks. What is your opinion of ways for these checks?

The retrowrap can easily be re-opened for visual checks. In addition to that, the simplest method to establish a test procedure is to fit a polished steel coupon of known weight under the wrap near the flange closure during installation. These can be removed at pre agreed periods during the evaluation (typically one year, three-year, five year) and weighed. These coupons are sent to a 3rd party institute for analysis. Any change represents corrosion loss per year in microns. This technique is well computed against accepted formulas.

4) Is it possible to apply anti-fouling systems on Retrowraps?

In theory it is possible but with our technology is designed to manage severe marine growth without anti-fouling systems.

5) Can the wrap/bolts withstand the pressures of hydro blasting?

Marine growth does not anchor itself very tightly to the wrap fabric. Therefore, hydro blasting would not be necessary.

6) Are there any challenges in installing Retrowrap around a diagonal pile?

Retrowrap can be installed normally on diagonal bracing or on diagonal piles. If there is a pile deck, Retrowraps can be pre-cut or cut on site to suit the geometry. In this case the wrap can be installed as long as the closure flange is positioned along the longest side.

7) If the risers are affected by pitting corrosion, how can we convince a customer that the gel does stop the advance pitting corrosion? Please explain how this works.

Once the corrosion pits are encapsulated within the gel, they are in an anaerobic state and the corrosion stops. However, if the pit depth is greater than 6mm, they should be filled by hand applying extra gel before installing the wrap.

8) Is there a sell by date for the wrap with and without the gel in case the wrap is not immediately installed?

Shelf life is approximately 2 to 3 years depending upon ambient temperature as long as the wraps are packaged for possible long-term storage. Under normal conditions, wraps may be stored for greater than 12 months which is typical within the offshore industry. However, we have inspected some wraps that sat in an offshore storage forgotten for over 3 years and these were found to be okay.

9) If the gel is not factory applied but rather at customer's site, how is it done?

The wraps must be gelled using hot flood coating techniques. We can see no benefit to gelling on site rather than factory gelling as it requires special appliances. However, we do sell extra gel for hand application over irregular shapes and severe pitting, if required.

10) The margins of pile diameters vary quite a bit due to corrosion in places. What are the margins?

The margins depend on the pile diameter. We can accommodate a diametric change of 1.5cm to 4.5cm on circumference. However, we can design to accommodate diametric changes of any kind if we know the dimensions in advance.

11) Once the wrap is put around the pile and fastened with the installation draw bolts, is it possible to rotate the wrap? If so, will this damage the felt and gel?

The wrap needs to be fully opened in order to reposition it on the pile. This will obviously not damage the felt or gel.

12) What are clear guidelines for when to use Retrowrap X?

Retrowrap X was specifically designed for the offshore industry that experiences extreme conditions. However, it can also be used in other applications that is likely to receive heavy abrasion or impact. Retrowrap is however not suitable to be used as fenders.

13) How long would it take to install the following standard wrap sizes? 6 pcs. 457 OD

Assuming the wraps are 3 m in length and the piles are cleaned and ready for installation, 6 pcs are installed within one working day. However, the installation time is not directly dependent on the pile diameter but may need to be considered.

14) To what extent do piles need to be cleaned? Would it be the same if paint had been applied?

Cleaning the pile is not as extensive as required for paint. It is okay if a few places are left with some rust as long as you remove the loose scale. The cleaning method of choice is hydro blasting. However, some clients use hand cleaning with scrapers and a powered wire brush. If there are any deep pockets of corrosion, they will be filled with gel from the Retrowrap when it is tensioned around the piling. If needed, extra Retrogel can be supplied.

15) What material is best for the bolts?

We supply ASTM - 316L/ISO - A4 marine grade stainless steel hardware, but we can also supply other corrosion resistant hardware if requested. However, we recommend using CCI approved materials for guaranteed sustainability.

16) How should I choose the right Retrowrap protection solution?

Please see product selection on our web site.

17) What is included in a typical Retrowrap quote?

The basic product price includes factory gelled Retrowrap and fastening bolt sets. Additionally, installation tools e.g., installation calipers or spare parts are quoted separately. There are different options regarding installation that affect the quote, please see installation on our web page for further information.

18) How do you position the wrap to start installation?

The wraps are positioned using rope with the help of a pulley block. The rope is placed through factory pre-attached lifting lugs that are permanently attached to the wrap's outer skin. The installation crew can easily adjust the vertical height by pulling the lifting ropes.

19) Is Retrowrap fireproof?

Retrowrap is not fireproof but it has high ignition temperature.

20) What type of guarantee is there?

We have different guarantee models to offer depending on location, environment and chosen solution. Usually between 1-10 years.

21) Does Retrowrap require maintenance?

Retrowrap is a maintenance-free technology throughout its service life.

22) What is "Splash Zone" Corrosion?

Splash zone corrosion comprises of 3 zones e.g., atmospheric, splash and tidal. It is by far the most aggressive and difficult location to provide a long-term solution. Highly oxygenated water combined with tidal rise and fall create a constantly changing wet and dry substrate on structures. The interface between the pile and deck is a high stress location and as such vulnerable to accelerated stress corrosion. The long-term protection of this splash zone area on structures such as jetties, loading berths, bridge piles, berthing dolphins, etc. is our core business.