

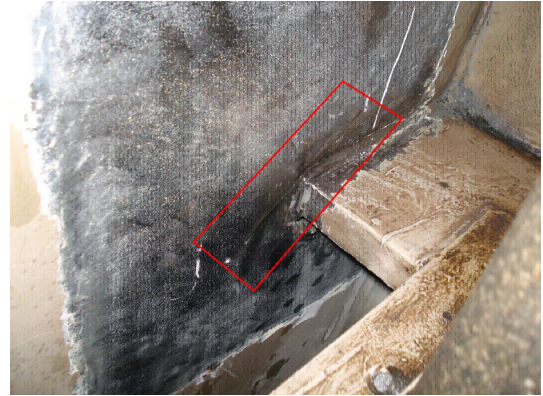
Crack in tank

Application:	Repair of Crack in tank
Place:	Rotterdam
Date:	February 2007
Job and report done by:	Repair Management Nederland B.V.
Wencon products used:	Rapid, Ceramic Coating, Perago disc, Cleaner, appl. tools



1. A crack found in a fuel oil tank, needs to be repaired, to stop leaking oil into the ballast tanks.

It was decided to drill holes in the outer ends of the crack, to prevent the crack to elongate.

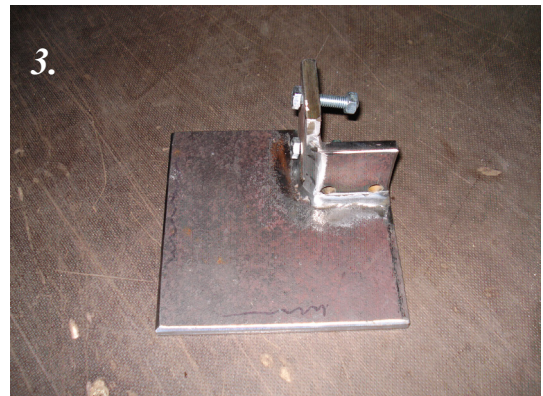


2. Surface cleaned with a Perago disc for a good adhesion.



3. A metal plate of 10 mm, was used to reinforce the repair and to recast the stress caused by the crack.

This plate was also cleaned with the Perago disc and Wencon Cleaner.

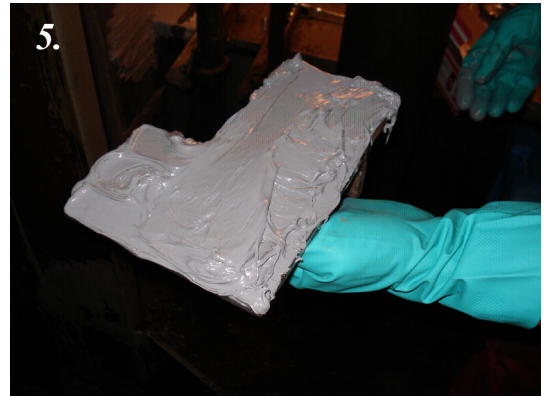


4. Before applying the Wencon Rapid, surface degreased with Wencon Cleaner.



5. A layer of Wencon Rapid was applied on both surfaces.

With a bolt, the metal place was secured to reinforce the wall and make a strong repair.



6. After a curing time of ½ hour, we applied Wencon Ceramic Coating to coat the surface and seal the crack.



7. Final result.



Choose the relevant surface preparation, according to the nature of the job. Seek advice from a Wencon Technician if needed.

Specification for surface preparation for Dry Applications

Defined as applications, where the Wencon product will be applied to a surface at a temperature minimum 3 degrees above dew point. Use the Wencon Products: Wencon Cream, Wencon Rapid, Wencon Coating, Wencon Ceramic Cream, Wencon Ceramic Coating, Wencon Hi-Temp, all requiring a dry surface.

1. Blast the machine part to SA 2 ½ using sharp-edged blasting media, to a roughness of min. 75 microns.
2. Leave the part for sweating out salts in a warm place for at least 12 hours or heat it up to 30 - 40 °C (86-104 °F) using gas torches.
3. Blast again to SA 2 ½ immediately prior to the application.
4. For parts containing lots of water and salt, it may be necessary to repeat 2. and 3. until the surface remains light grey for at least 2 hours after blasting.
5. Always use Wencon Cleaner prior to application.

Specification for surface preparation for Wet/Damp Applications

Defined as applications, where the Wencon product will be applied to a surface at a temperature less than 3 degrees above dew point. Use the products Wencon UW Putty, Wencon UW Cream and Wencon UW Coating for applications on wet or damp surfaces.

1. Water jet the entire surface with water and sand to a standard equal to SA 2½, as described above.

Specification for surface preparation for Emergency/Temporary Applications

Perago Treatment

Perago is a rubber disk with hard steel spikes mounted on the periphery. Perago can be mounted in a normal drilling machine, and gives a surface close to a blasted surface - clean and rough with sharp edges. Perago dishes can be ordered at Wencon and at all Wencon Distributors.

Grinding

Wheel grinding is often an acceptable surface preparation for emergency applications, where shot blasting is not possible. When grinding use a coarse stone or flap. Use the Wencon Cleaner before and after grinding. Grinding with sandpaper or emery cloth is only advisable when, for example, carrying out shaft-repair on a lathe. Often the grinding will not hit the dents.

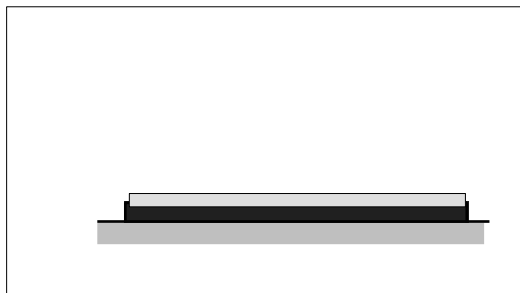
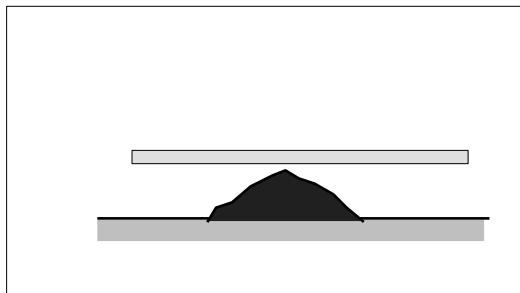
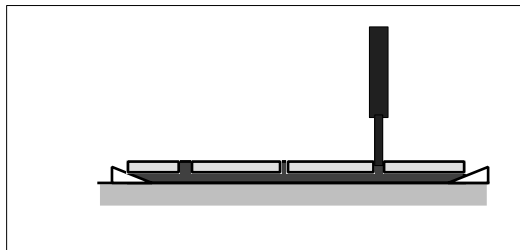
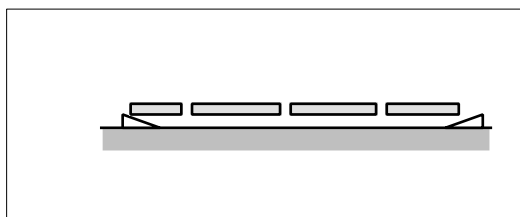
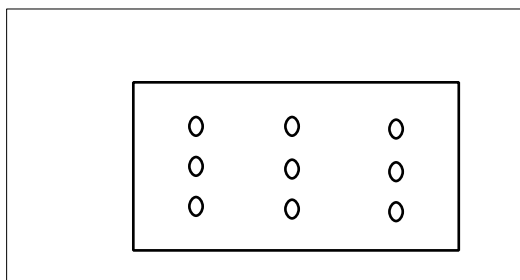
Needle Gunning

Needle gunning is a method that has almost been forgotten in recent years. Or should we say is mostly used for very rough cleaning or removal of rust. It is possible to do a very nice job using a needle gun, but it takes time and should be closely supervised. It is essential that the marks from the sharp needles cover the whole surface so that none of the original surface remains. It is recommendable to steam clean the surface before needle gunning.

Wire Brushing

Wire brushing can be a good way of removing scales, rust and old paint. However, you will need to grind the surfaces after the wirebrushing to make the surface as rough as possible.

Fixation of doubler plates on deck



Often, it is not possible to fix a doubler by welding. For instance on a tank top.

Here is given two methods for the application.

Method 1.

1. Drill holes in the doubler 6-8 mm (0,24-0,32 inch) Ø for injection. Make one hole for every 400 cmsq. Grind or shot blast the mating surfaces to bare metal and degrease it with Wencon Cleaner.
2. Place the doubler on 4 wedges in the desired height min. 3-4 mm (0,12-0,16 inch).
3. Wencon Cream or Coating is mixed, filled into empty cartridges and injected through the holes. Begin in the middle area and work your way out. Make sure the gap being totally filled. After curing (see instructions leaflet) the job is finished.

Method 2.

4. The job can be done avoiding the drilled holes. Mix and apply Wencon Cream or Rapid as shown in fig. 4. Make sure, that there is enough material to be squeezed out from the gap during the mounting.
5. Mount the doubler in the wet material and make sure, that excess material is being squeezed out all way round the plate to be sure of total fixation. It may be advantageous to apply a very thin layer of Wencon on both mating surfaces initially. Let it cure before loading.

Method 2 is the quickest, but has limitations regarding the size of the doubler.

If method 2 is used on very irregular surface, it is recommended, that Wencon Cream or Rapid should be used to create an even surface before the mounting.

The larger doublers the more difficult it will be to press the plate in position.

Apply vibration by the means of a pneumatic hammer or the like on the top.