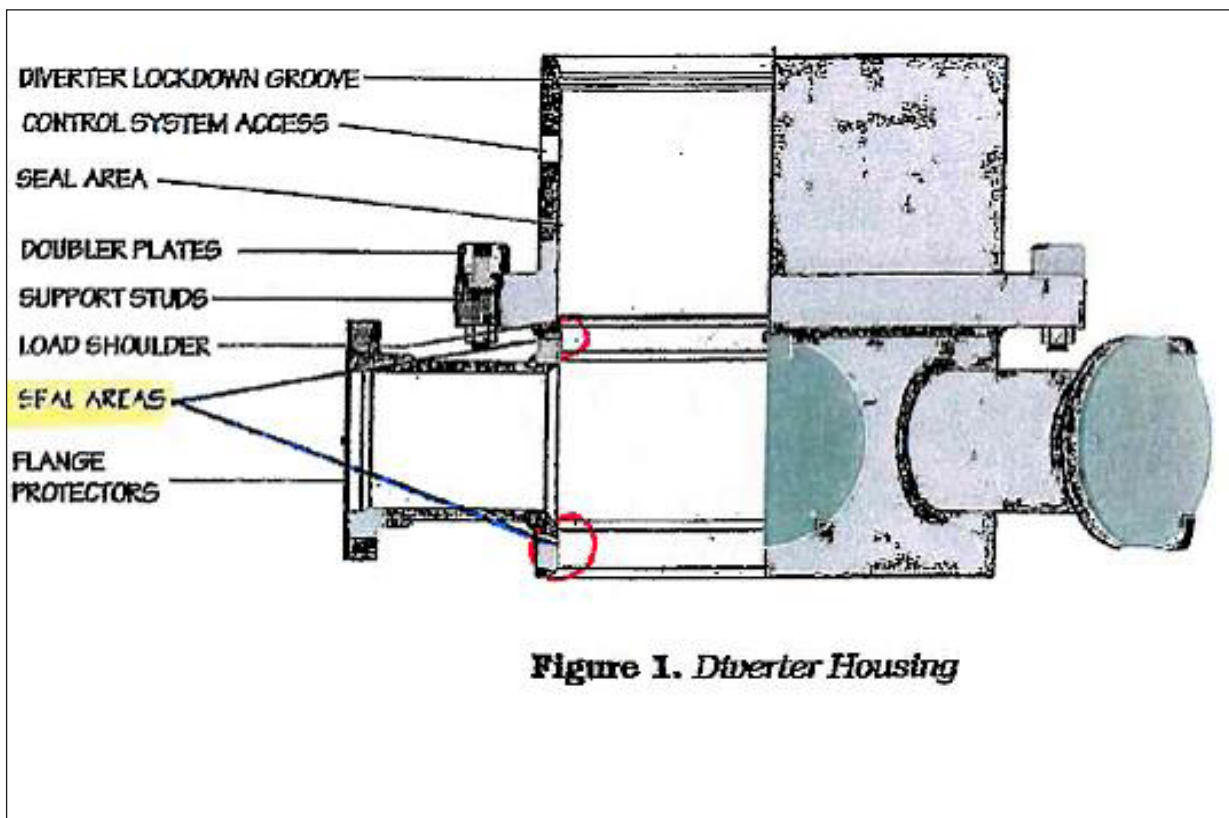


Rebuilding of Diverter Head

Application:	Rebuilding of Diverter Head
Place:	On site, offshore, Norway
Date:	September 2012
Job and report done by:	Assens Shipyard, Assens, DK
Wencon products used:	Ceramic Coating, Perago Disc, Cleaner, app. tools



Introduction

As alternative to the very expensive and time consuming welding and on-site procedure, Wencon's solution using Ceramic Coating has been chosen. All surfaces to be rebuilt by applying Wencon Ceramic Coating in layers until minimum original surface level are reached, hereafter grinded by hand until original shape is obtained.

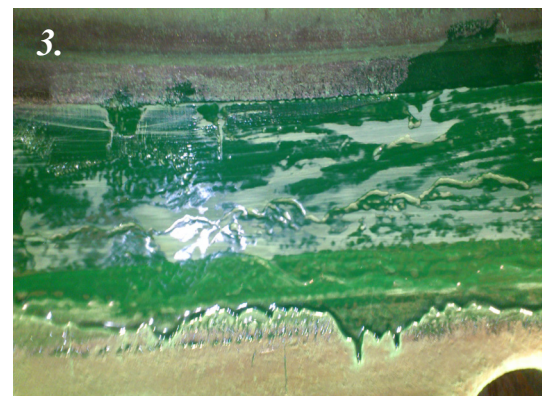
1. Photo shows clearly damage of seal surface, which obviously causes inappropriate leak-ages.



2. Surface prepared, using Wencon Perago Disc and Wencon Cleaner - surface are now prepared and ready for application of Wencon Ceramic Coating.



3. Wencon Ceramic Coating applied until minimum original surface level, sanding has begun.



4. Final result. The damaged seal surface is now intact, and ready for many years of operation again.



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.

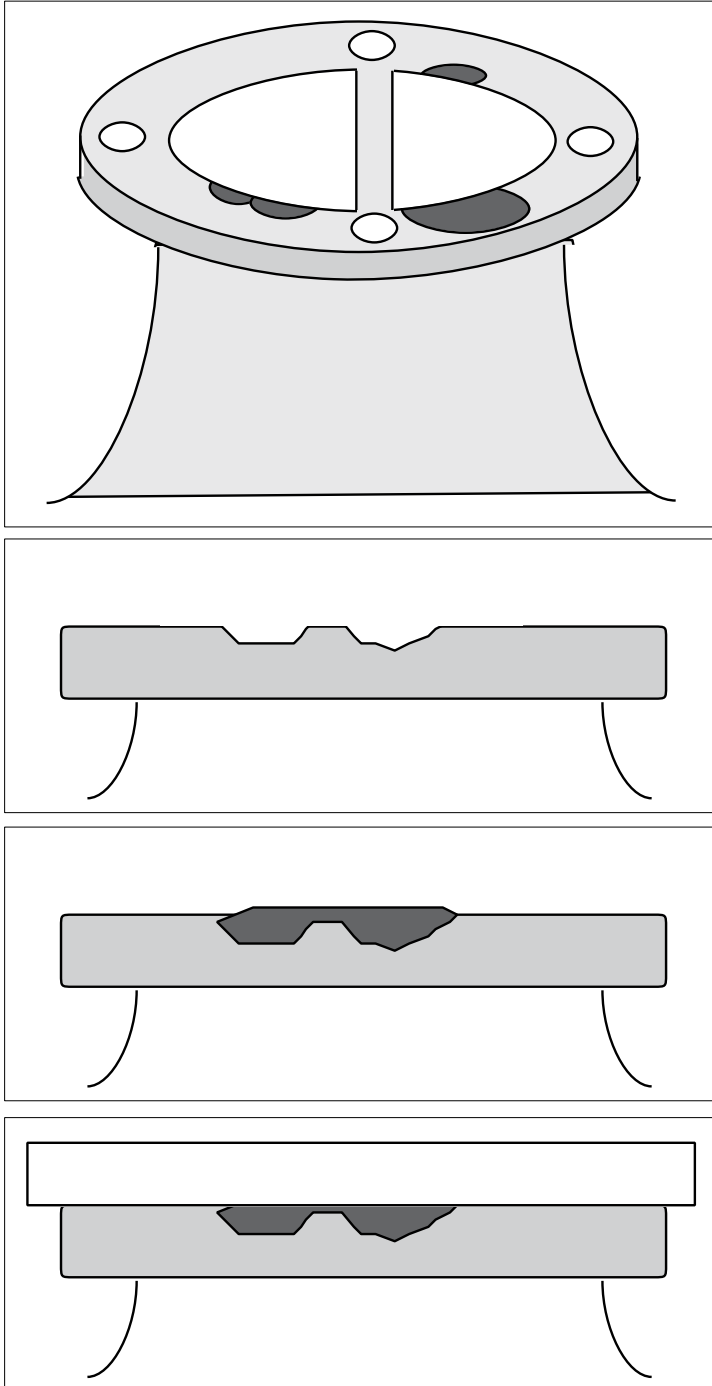
Needle Gunning

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.

Repair of corroded flange



Corroded flanges can be repaired, using Wencon. The obvious way would be by shut blasting the flange, applying of Wencon, letting it cure, and machine the flange to size. This is not always possible, so here is a way to do it on site.

1. Dismantle the flange and clean it with Wencon Cleaner.
2. Prepare the corroded area by grinding or needle gunning (sharp needles).
3. Clean it though roughly with Wencon Cleaner and apply a suitable layer of Wencon Cream or Rapid on to the corroded area.
4. Mount and hold a template to the flange until full cure has occurred. The template can be made in thick plastic plate (polyethylene) to avoid the use of release agent. If it is made of metal, use Wencon Release Agent on the template to avoid adhesion.

After curing, remove the template, and form the holes in the flange by the use of a round file.

If a number of flanges on i.e. a manifold should be in line, use a big template covering all the flanges at the same time.

It is also possible to use the engine, being the mating surfaces as a template.

In this case, it is essential to dismantle the manifold after curing and remove excess material.