

## Thruster Tunnel

<b>Application:</b>	Repair of Thruster Tunnel
<b>Place:</b>	Talleres Navales Pesqueros, Las Palmas de Gran Canaria
<b>Date:</b>	July 2017
<b>Job and report done by:</b>	Central de Reparaciones La Luz
<b>Wencon products used:</b>	Rapid, Coating blue and white, Cleaner, appl. tools



1+2

Tunnel was found with lack of material, due to corrosion and cavitation in the area around the propeller. Propeller and thruster removed to allow work in the tunnel.



3.

Washing and blasting of the tunnel was done to remove oil, paint and adherents. Area was heated up to remove rest of salt and water and to prepare surface properly, sandblasting was repeated.



4.

Wencon Cleaner applied to achieve best possible adhesion and after that Wencon Rapid applied for rebuilding of damaged areas.



5+6

While layer of Rapid is still tacky, first layer of Wencon Coating white and second layer of Wencon coating blue are applied.

Application job made in accordance with Wencon application standard



7. Last photo shows Thruster tunnel after refurbishment and with first layer of paint.



**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.

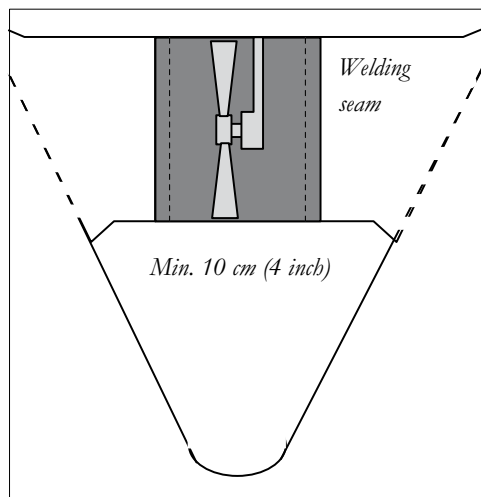
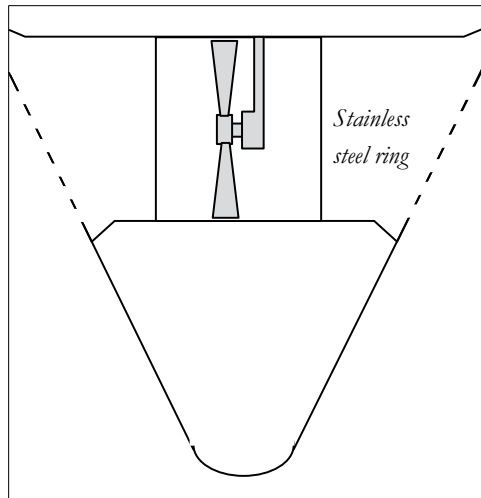
### **Needle Gunning**

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.

## Bow thruster tunnel



Often we see that the Bow thruster tunnel is suffering a lot from bi-metallic corrosion. The reason is a mix of many different metals in the area - mild steel, stainless steel ring, bronze head / propeller etc.

The area is easy to repair and to protect against coming bi-metallic corrosion, by rebuilding the pittings with Wencon Rapid, and coating with Wencon Coating.

1. Blast the area to SA 2½. All the attacked area has to be blasted - at least to 10 cm on each side of the welding seams for the stainless steel ring.
2. Sweat out salt and water using hot air or a flame.
3. Blast again.
4. Clean the area with Wencon Cleaner.
5. Mix and apply the first layer of Wencon Coating white, while the Rapid is tacky, and let it cure.
6. Mix and apply the second layer of Wencon Coating blue, while the first layer is still tacky and let it cure.
7. The tunnel can be painted with normal ships paint here after to have an even colour.

Som times we see that the Bow Thruster Head also is suffering from bi-metallic corrosion. This can be repaired using the same methode.