

Service Bulletin

Priority **RED**

No 12 2007-03-29

Corrosion Problems related to High Bilge Water Temperature TD & CD Units.

As described earlier in Service Bulletin No 1, 2000-03-20 there is some major reasons why corrosion problems occur:

- The system has not been properly Back Flushed with Fresh Water after having completed a full Bilge Water Cleaning- and Discharge Operation.
- The temperature of the Bilge Water to be treated has been $> 55^{\circ}\text{C}$
- Salt water (high Cl content) standing still in the filter stages.

We would like to once again remind about the importance of those reasons. Recently we have encountered a side effect of what can happen if the temperature of the bilge water is more than 55°C . The mounted sacrificial anodes (Marinfloc AB's Article No 15110) mounted in filter steps are exposed to local pitting and need to be replaced. The process occurs very rapidly. What happens is that when a sacrificial anode made by zinc and reinforced by iron is exposed to a corrosive media which temperature is higher than 55°C the polarity of zinc and iron switches, in other words the iron sacrifices before the zinc. If the sacrificial anode only would be made of solid zinc without iron reinforcement the anode would sacrifice locally and the anode would break. Thanks to the iron reinforcement we are using, the scarification of the anode will be even over the total length of the anode. But if the temperature is too high this compensation effect will not work and local pitting will occur and even the iron reinforcement will break down. If this happens the anode need to be replaced.

We would also like to point out how important it is to follow the maintenance period stated in the manual. The zinc anodes should be checked according to the table below (*Table 1*). Before the anode is mounted back in place, please check that the gasket is good. Do not use thread tape on the anode thread, then the zinc anode risk to be isolated from the filter step structure and will not work.

*Table 1. Inspection interval of the sacrificial anode:
After every four week or (whatever comes first):*

Model	0,25	0,5	1,0	2,0	3,0	4,0	5,0
Discharge m ³	25	50	100	200	300	400	500

On the old Marinfloc TD units it is important to check the floc tanks regularly. What happens is that when the system has been in operation for a while the galvanized surface in the floc tanks breaks down and the tank start to corrode. This is not a rapid process but it is important to take it in consideration. Our recommendation is to protect the floc tanks with sacrificial zinc anodes when the galvanized surface starts to be broken down. To break down the galvanized surface will take everything from 2 to 10 years depending on the water quality treated by the Marinfloc system.

All the previous service bulletins and other important information, as e.g. updated lists of approved chemical and flocculants, can be found on our website: www.marinfloc.com

Don't hesitate to contact us if any questions or problems!

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-Our mission is clear ~ a clean sea!-