

My experience with SeaBis electrolysis control system

Since when I bought my sailing yacht in Spain in 2009 I noted some faster than usual corrosion at some specific places like inside anchor compartment and rudder compartment (below deck) even with my poor acknowledgment of metal boats at that time. Some others corrosion issues became visible after new electronics and new engine installation in 2014.

After long time searching of electrolysis causes and repair I found SeaBis electrolysis control system in a net sailing forum.

I contacted Mr Glen from SeaBis in December 2016 and purchased 4 SeaBis Master units. Unfortunately I have no material to show how the entire process took place like “before and after” pictures, but I have something.

This picture below shows the boat on hard in Curacao 9 months after anti-fouling repainting and new electronics and new engine installations end of 2013. The hull under waterline completely full of blisters. This shot was taken in September 2014.



Mr Glen confirmed these blisters were caused by electrolysis. But much more was yet to come.

We exchange more than hundred emails in one week during December 2016. Questions were made and doubts solved one by one.

Mr Glen instructed me to install the units as follow:

one - House Bank
one - Engine Bank
one - Windlass
one - Bow Thruster

This is the scenario after SeaBis installation and repair:

BOW THRUSTER

Situation: critical electrolysis on positive side(red flash).

Cause: DC 12V to 24V converter(poor design).

Repair: device removed.

After action: electrolysis eliminated.

WINDLASS

Situation: critical electrolysis on negative side(red flash).

Cause: windlass DC electric motor negative brushes not insulated.

Repair: installation of remote solenoid on windlass electric motor negative wire.

After action: momentary critical electrolysis during windlass operation.

Restriction: 200 hours per year(33 minutes per day).

How to eliminate: insulation of electric motor negative brushes.

ENGINE BANK

Situation: critical electrolysis on negative side(red flash).

Cause 1: negative wire running from starting battery to non-insulated engine starter motor.

Repair 1: installation of remote solenoid on negative wire from starting battery to engine starter motor.

After action 1: momentary critical electrolysis during engine start(5 seconds).

Restriction 1: 200 hours per year(33 minutes per day).

How to eliminate: insulation of engine starter motor negative brushes.

Cause 2: non-insulated alternator.

Repair 2: replacement of non-insulated alternator by an insulated model.

After action 2: electrolysis eliminated.

Cause 3: non-insulated engine sensors and warning switches.

Repair 3: replacement of non-insulated engine sensors and warning switches by insulated versions.

After action 3: electrolysis eliminated.

Situation: Caution status on negative side(yellow led light)

Cause: three stages alternator charger(poor design).

Repair: device removed.

After action: electrolysis(very low) eliminated.

HOUSE BANK

Situation: critical electrolysis on negative side(red flash).

Cause: Sonar sensor wiring possible poor designed.

Repair: installation of remote switch on negative wire.

After action: momentary critical electrolysis during sonar operation.

Restriction: 200 hours per year(33 minutes per day).

How to eliminate: not defined. Waiting to haul out.

Situation: AC current interfering DC circuits.

Cause 1: DC charger(poor design/renamed brand).

Repair 1: device removed.

After action 1: fault eliminated.

Cause 2: ultrasonic anti-fouling.

Repair 2: device removed.

After action: fault eliminated.

Attached more pictures of my experience with SeaBis electrolysis control system.

SeaBis at normal operation



Remote Engine start solenoid



Remote Bow Thruster solenoid



Windlass remote solenoid switch



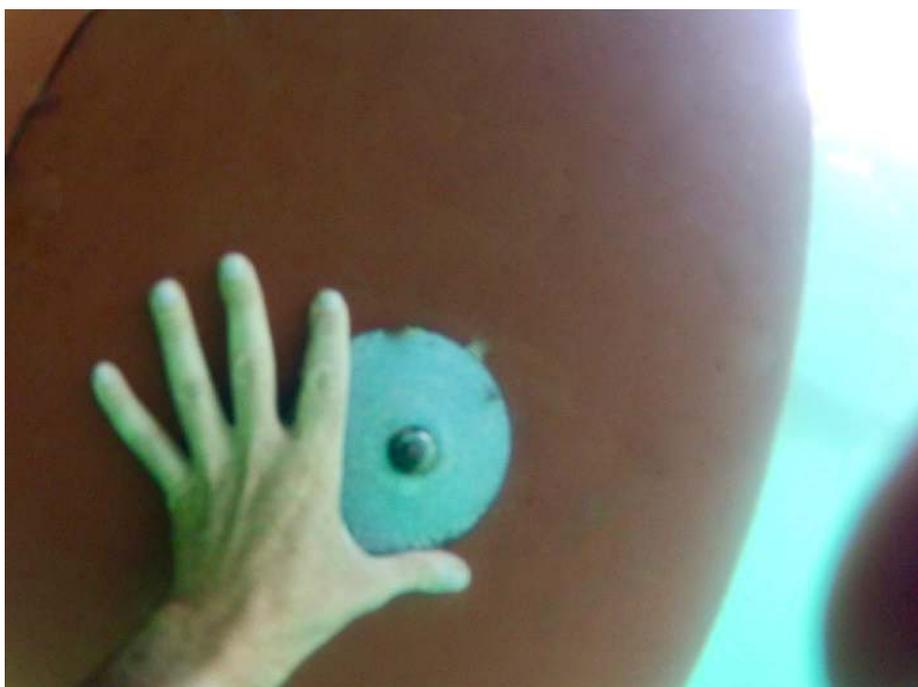
Engine start solenoid remote switch



Rudder compartment. Faster than usual metal corrosion points. After SeaBis installation those corrossions ended. A rust stopper was applied followed by a normal white paint coating and corrosion don't develop ever since.



Unfortunately my only camera available for underwater use is a Go Pro hero 2, not made for close shots. The minimal angle of view is 127 degrees with a lot of fish eye effect and to make things worse the water is a bit murky but I decided to attach two shots taken in Tahiti in November 2017 to show the rudder with a complete absence of blisters and anodes not even 5% consumed after almost one year.



CONCLUSION

With Seabis installed is very easy to identify and repair any electrolysis event. Very detailed instructions available. Mr Glen never takes more than 24 hours to reply any of my emails. Every potential source of electrolysis must have one single SeaBis Master unit installed - **PERMANENTLY!!!!!!**

After 10 months using SeaBis Master there are no blisters below waterline, zinc anodes have been consumed at their normal slow speed and some faster than usual above and below deck points of corrosion that I noted before SeaBis now became a very very very slow normal metal corrosion easy to deal, fix and eliminate.

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