#### **PROTECCION CATODICA (C.I.) DE PEQUEÑAS EMBARCACIONES S.L**



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# **TROUBLESHOOTING LIST**

### **PROTECTION EQUIPMENT**

Consists of: Regulator Spike Filtre Anode Installation

#### PROBLEM No current comes out of the regulator. (The amperimeter reads 0)

## REGULATOR

Check if current reaches the regulator. If so, its LED should light up and in digital equipment, numbers should appear on the display.

If tension is detected in the regulator and current is not coming out. The regulator performance should be tested by connecting a 12 V and at least 50W car lamp light bulb as follows:

Connect one of the light bulb's poles to the regulator red exit cable(cable that connects to the anode) and the negative pole to the black entrance cable of the regulator (that connects to the Spike Filtre )or directly to the grounding plate.(Check website Downloads under Technical Manual "Cathodic protection...below the waterline" the installation diagram that corresponds to your equipment). The light bulb should light up and the amperimeter should show electric consumption.

The regulator can also be tested by connecting its red exit cable to an unpainted 200mmx200mm aluminium ,steel or stainless steel sheet .A cable with a minimum section of at least 2.5mm2 should be used.

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If the metal sheet is submerged, the amperimeter should show electrical consumption. This metal sheet should never be in contact with the hull as it could result in a shortcircuit.

If all of these tests prove that no current comes out, we could also test the amperimeter with an external 10amp DC amperimeter.

If the above mentioned procedures don't solve the problem, you can conclude that the regulator is damaged and therefore has to be replaced .The damaged regulator can be sent back to be repaired..

# ANODE AND INSTALLATION

If the regulator is working correctly and still no current comes out ,The installation should be checked by a competent electrician according to website installation diagrams ,that correspond to your equipment( check Downloads under "Cathodic Protection...below the waterline") to make sure there is nothing wrong with it.

In case installation seems to be correct, the anode should be tested, making sure that current flows. This can be done by using a cable with a minimum section of 2.5mm2 which should go from the regulator exit straight to the anode cable.

The installation could also be tested by connecting a 12V and at least 5Amp. battery as follows:

(A motorbike battery could be used)Its positive pole should be connected to the anode and the negative pole to the grounding plate.

A 10 amp DC amperimeter should be placed between the battery's positive pole and the anode to detect how current comes through the anode into the sea. If this doesn't occur, we could then conclude that the anode is not working and you should contact your nearest PROYTEC distributor.

### MEASURING EQUIPMENT

This page is under construction and will become available soon.