70 years of CATHODIC PROTECTION CO LTD

Cuprion®
Marine Anti-Fouling System

Cuprion Marine Anti-Fouling System

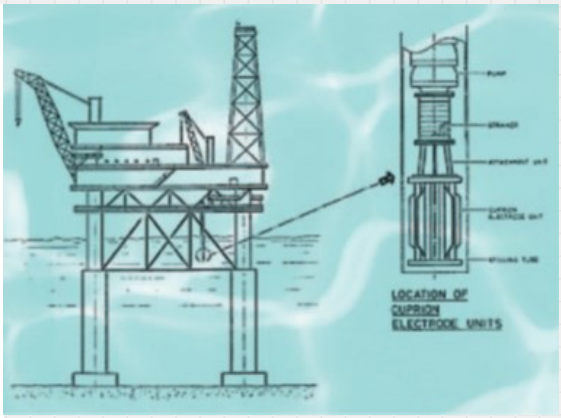
Cathodic Protection Co. Ltd. has manufactured and supplied the electrolytic Cuprion® marine anti-fouling system since the early 1970's to protect pumped sea water systems against marine growth. Today, the system is used by many of the major oil and gas offshore operators to protect vertical sea water and fire water pumps on platforms. Other applications include jetty fire pumps and sea water intake systems.

Benefits of the Cuprion® Anti-Fouling system include:

- Reduction in power requirements over alternative methods for fouling control
- Low maintenance system
- Low power requirement
- No handling or storage of chemicals required
- Environmentally acceptable

SYSTEM DESCRIPTION

The method is based upon the use of impressed current on copper and aluminium anodes, which are themselves contained within an insulated steel frame which forms the cathode. The anode/cathode electrode unit is suspended from the pump motor base within the confines of the caisson, so that all the water entering the pump must pass the electrode unit. The Cuprion® system consists of two parts – the electrode unit and control panel. The electrode contains a number of copper and aluminium anode bars held together in a steel frame to form the cathode. The actual number and size of the anodes is configured to suit each installation and available space for mounting the electrode unit. The anodes are connected to the constant current rectifier located within a safe area. The control panel is designed to regulate the anode currents in both 'pump on' and 'pump off' condition, so that during the pump standby condition an atmosphere of copper ions in the local environment, will maintain the pump free from fouling. This feature is particularly useful for installation on fire pumps that are generally operated for a short period each week. Dosage levels of copper ions are extremely small and measured in micrograms per litre of seawater. Therefore, relatively small quantities of copper are required to provide protection dependent upon the flow rate and life required.



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APPLICATION FOR SUBMERGED PUMPS

With extensive experience in the design of Cuprion® systems and provide anti-fouling equipment for a wide variety of applications including:

- Offshore sea water lift pumps
- Offshore fire water lift pumps
- Jockey pumps
- Jetty fire water pumps
- Industrial sea water cooling systems

DECK MOUNTED OPTION

For some applications traditional method of pump/electrode configuration may not be suitable. As an alternative we offer the deck mounted system.

With the deck mounted Cuprion® anti-fouling system, the anodes are located inside an tank through which sea water is fed from the main sea water system. As the water passes through the tank, the carefully controlled anode currents ensure that the correct dosing level is applied for the particular application. The treated water is then piped down directly to the pump suction. In this way several pumps can be protected against fouling from a single treatment source. The Deck Mounted Cuprion® System is ideally suited for retro-fitting, where the pump/electrode configuration may not be possible.