

# Zinc Electrode for Seawater

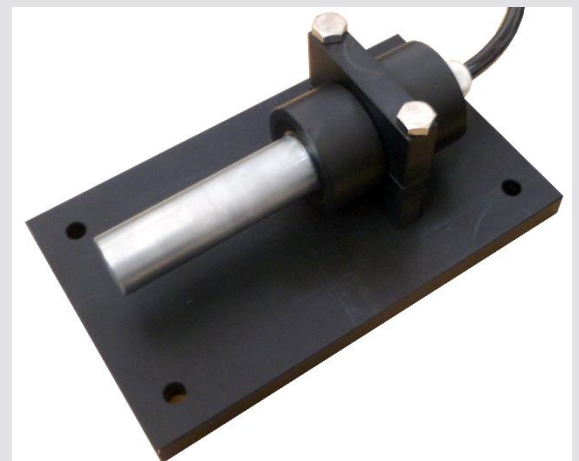
Zinc Electrode for Seawater is a **reference electrode** developed by Cescor for **cathodic protection monitoring** of offshore platforms, harbour sheet piling and other metallic structures exposed to **seawater**.

It is made of a high-purity Zinc alloy, ensuring **accuracy and stability** of potential measurements. The electrode frame is made of stainless steel, coated carbon steel or plastic. The electrode can be **fixed to the structure** by means of specifically designed supports.



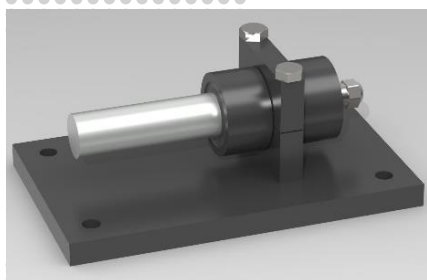
## Advantages

- Potential stability
- Zinc does not suffer from polarization issues
- Long lasting durability
- Enhanced reliability with respect to Silver/Silver Chloride electrode
- Environment friendly



Zinc Electrode for Seawater measures the protection potential

# Zinc Electrode for Seawater



## INSTALLATION

The reference electrode shall be fixed near the point of the structure to be monitored. In case of metallic frame, this shall be electrically connected to the structure.

The cable provides connection between the test point and the electrode. Manual measurements can be performed at the test point or, alternatively, automatic systems can be installed.

## USE

The Zinc electrode potential is  $-1040 \pm 25$  mV vs. SCE (Saturated Calomel Electrode).

The potential can be converted to Silver Chloride electrode by adding  $-1050$  mV to the measured value. Example:  $+100$  mV measured value corresponds to  $-950$  mV vs. Ag/AgCl.

The recommended impedance for measuring devices is  $10 \text{ M}\Omega$ .

## REGENERATION

The electrode can be regenerated by means of circulation of about  $3\div 5 \text{ mA/cm}^2$  anodic current between the electrode and the structure for about 15 min (max 20 V DC voltage).

This procedure removes corrosion products and deposits from the surface. It is recommended to perform the regeneration periodically, with a frequency of about once in a month.

## CABLE

The electrode is equipped with an armoured and shielded cable, with a polyurethane external sheath that provide high mechanical resistance and durability in seawater.

## LIFE EXPECTANCY

Operating life is expected to be at least 30 years.



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*Festina lente is a classical motto and oxymoron meaning 'make haste slowly' and illustrated by different pairings, especially the dolphin and the anchor. Festina lente was adopted by Cescor to express its vision for offshore integrity activities: firmly based on sound knowledge – the anchor, but moving fast, like the dolphin, where the Client needs are.*



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