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 ± 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 MΩ.

REGENERATION
The electrode can be regenerated by means of circulation of about 3÷5 mA/cm² 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.