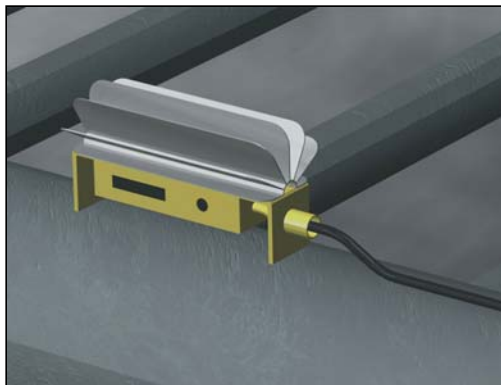


DR-2 CD™ Polarization Monitor

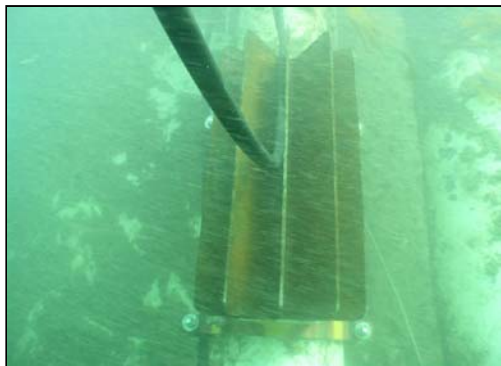
Polatrak® Cathodic Protection Monitoring



The DR-2 CD combines two instruments: the DR-2 reference cell (yellow and black) and a current density monitor (top array).



DR-2 CD shown in-situ on the bare framing of an offshore jacket



Offshore installation in progress

Product Overview

The Polatrak DR-2 CD combines the standard DR-2™ dual element reference electrode with a 1 sq. meter current density monitor, thus providing a compact package which will give accurate polarization data from a single instrument. The instrument may be either hard wired to a surface location or locally into a SunStation™ readout module.

The sintered Ag/AgCl reference electrode provides very accurate potential data to monitor polarization of the structure; the heavy duty zinc electrode element provides a long term ultra reliable low resolution electrode. The compact current density coupon allows placement in confined spaces.

Use of permanent monitoring systems has grown recently, based on increased integrity emphasis and the ease of data telemetry. The DR-2 CD represents the latest innovation in cathodic protection monitoring from the world's leading supplier of these systems.

Applications

- Offshore platform jackets & drill rigs
- Seawater ballast banks on SPAR, TLP, and FSU / FPSO structures
- SPAR center well areas
- Inshore structures, piers, jetties, wharves
- Subsea equipment wired to SunStation permanent readout
- As impressed current CP controller

Main Benefits

- Structures with permanent CP monitoring systems can be inspected subsea much less frequently.
- The rugged design allows the system to be pre-installed or retrofitted.
- The double steel wire armored cable can be free routed on offshore structures thus saving cost of conduit or duct systems.
- The dual elements combine high accuracy +/- 0.005 volts with proven longevity.
- Ideal for seawater ballast tanks or areas where post installation access is difficult.

Specifications

Description:

A rugged dual element (Ag/AgCl sw / Zinc) reference electrode designed for weld-on, bolt-on or clamp-on attachment to an offshore structure. The dual element configuration provides high accuracy and calibration capability of Silver Chloride and the long term reliability of Zinc. Designed for permanent monitoring of cathodic protection systems, the electrode has a 20 year design life. Added to the back of the instrument is a 10 sq ft (1 sq m) current density monitoring array, such that polarization data may be logged directly from the instrument.

Electrode Elements (2):

| | | | |
|-------------|-------------------------------------|-------------------|--------------------------------------|
| Material: | Zinc (High Purity 99.5%) | Weight: | 12 lb. (5.45 Kg.) |
| Dimensions: | 6x5x1 1/2 in (15.2x12.7x3.8 cm) | Anti-passivation: | Embedded Carbon Steel Rods |
| Accuracy: | +/- 0.02 Volts | | |
| Material: | Sintered Ag/AgCl w Silver Wire Core | | |
| Weight: | 0.09 oz (2.5 gm) | Dimensions: | 0.47" Dia x 0.20" (12 mm Dia x 5 mm) |
| Accuracy: | +/- 0.005 Volts | | |

Electrode Housing:

| | | | |
|-----------|--------------|-------------|---|
| Material: | Black Delrin | Dimensions: | 18" x 5" x 4" (45.7 cm x 12.7 cm x 10.2 cm) |
|-----------|--------------|-------------|---|

Cable Encapsulation:

Cold Mold Soft Polyurethane made inside embedded PVC conduit within electrode housing.

Electrode Frame:

| | | | |
|--------------------|--|----------|---------------------|
| Material: | ASTM A36 Carbon Steel | Coating: | 125 mm Marine Epoxy |
| Conduit Interface: | 2" (5.08 cm) Pipe coupling or 2" (5.08 cm) 150# Blind flange | | |

Dimensions:

27" x 6" x 6" (68.6 cm x 15.2 cm x 15.2 cm)

Current Density Fins:

| | | | |
|------------|--|---------|-------------------|
| Material: | ASTM A36 carbon steel 0.125" Plate (3 mm) | Finish: | Sandblast |
| Insulator: | Natural Delrin isolation plate and spacers | Shunt: | 1 mV = 10mA/sq. m |

Cable:

4 x #12 AWG PVC Insulated, PU Bedded, DGSWA, HMWPE. Sheathed (available upon request).