

REFERENCE CELLS

Permacell[®] 805 DW

Permanent Reference Cell

Long-Life Testing For Deep Water Structures

Determining the electrical potential between a structure and its electrolyte is necessary for effective corrosion control. This is true regardless of a structure's location. To perform this essential testing on offshore platforms, pipelines, and other structures located in deep waters, Corrpro offers the Permacell 805 DW reference cell. The cell is composed of a 99.9% pure silver element, which is embedded with silver and chloride particles. This uniquely formed element remains electrically stable in salt water environments, and permits the Permacell 805 cell to be accurate to within five millivolts. Protection is provided to the element by an inert tubing. This tubing completely encases the element, but is perforated to allow the cell to be submersible. An attachable weight section is also provided to anchor the cell in place.

A common failure problem for deep water reference cells is the intrusion of salt water at the lead wire connection. Corrpro's Permacell 805 DW addresses this problem with a high-pressure connection, which remains water tight to depths of up to 1,500 feet. This superior connection is made by injecting hot neoprene over the electrical connection between the lead wire and reference cell element. The lead wire itself contains a two-part insulation of Tefzel and neoprene to further prevent water penetration. A strain relief is also utilized to provide the wire with extra mechanical support.



Typical Applications

The 805 DW reference cell is designed to provide ten years or more of accurate potential readings on deep water structures. It remains electrically stable in environments with high chloride concentrations, and can be installed to depths of up to 1,500 feet. The cell's maximum operating temperature is 158°F. Equipped with an attachable weight, the 805 DW can be either permanently installed, or used in conjunction with submersible vehicles to conduct potential surveys.



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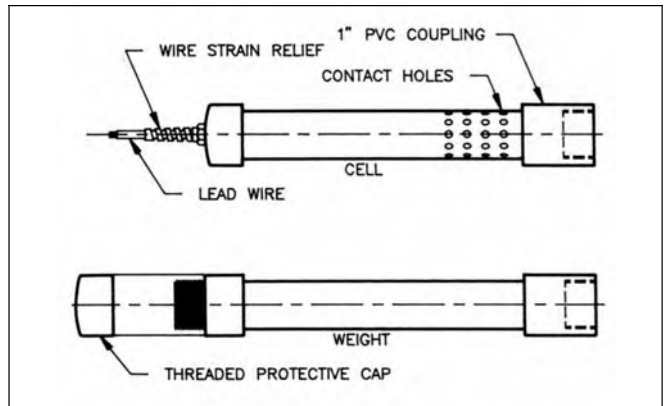
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Permanent Reference Cell

Ordering Procedure

All Corpro 805 DW reference cells are made according to the customer's specifications. To order this reference cell for your application, indicate that you need a Corpro Permacell 805 DW reference cell, and specify the quantity desired, lead wire length, and whether an attachable weight is needed. An example is provided to help illustrate this process.

Ordering Procedure Example	
ITEM	EXAMPLE
Quantity	20
Product	Permanent Reference Cell
Permacell Model	805 DW
Lead Wire: Length	300 ft.
Size (#14 AWG = Standard)	#14 AWG
Insulation (HMWPE = Standard)	HMWPE
Attachable Weight	Yes



Product Specifications

NOMINAL DIMENSIONS in. (mm)		WT. lbs. (kg)	ELECTRICAL STABILITY	MAX. TEMP. °F (°C)	MAX. OPERATING DEPTH ft. (m)	DESIGN LIFE
Ø	LENGTH					
1 (25.4)	5.4 (137.2)	1 (0.45)	±5 millivolts with 3.0 microamp load	158°F (70°C)	1,500 (457.2)	10 years

