

The Corrosion Monitor

Newsletter: Volume 12 - Winter 2015

Topics

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for Pipeline Isolation

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Farwest News

Advantages of Monolithic Isolation Joints for Pipeline Isolation

When applying cathodic protection to pipelines, there is often a need to electrically isolate sections of the pipeline in order to provide adequate protection to the desired section of line. This is done by several different methods including flange isolation kits, isolation unions and monolithic isolating joints.

Each of these product solutions offer different advantages but the monolithic isolating joint (MIJ) may lead the pack in this regard.

For example:

- An MIJ is a unitized, weld-in fitting that once installed on the pipeline, will require no service or maintenance.
- As the MIJ is welded onto the pipeline, like any other section of pipe, there are no field installation issues common with other isolation fittings.
- After the MIJ is welded into place, it can be coated like any other section of pipeline. The MIJ is delivered with a factory applied epoxy coating, but the welded joints must be field coated afterwards to proper specifications.
- The MIJ can be buried or submerged, where other fittings should not be. In soil installations, costly vaults can be eliminated when using an MIJ.
- Lightning arrestors, surge protection and pipeline decouplers can be added to MIJs as an option as well as grounding lugs and lifting lugs.



MIJs are typically utilized for natural gas, oil and fuel pipelines but can be used for other pipeline applications as well.

In addition to varying diameters, there are choices for pipe grades, wall thicknesses, pressure ratings and taper bores to match existing pipeline specifications. Factory coating options are also available.

Depending on the manufacturer, MIJs are factory tested for weld integrity, pressure rating, dielectric strength, electrical resistance, and external coating holidays.

A product certification report is supplied with each MIJ and a unique, traceable identification number is assigned to each fitting.

In years past, these fittings were only made overseas and were difficult to obtain in some cases. However, that has changed and there is an American made alternative for sizes up to 24" diameter. This has resulted in shorter delivery times and lower shipping costs. Farwest is stocking many MIJs at several of our warehouse locations, so delivery can be made very quickly in many instances.

As electrical isolation of a pipeline is very critical, a monolithic isolating joint may be the best long-term solution to accomplish this need. Contact a Farwest technical representative for more information and pricing.

[Click here for more info on our website](#)

Solar Powered Cathodic Protection

In areas where conventional grid power is not available for cathodic protection (CP), a solar powered CP system may be a viable alternative for consideration. A solar power system converts light energy into DC power through the use of a solar "array". The amount of power generated by the array depends on light intensity so even during periods of inclement weather, some power will still be generated by the system. Batteries store power from the array and then provide DC power to the CP system during periods of darkness or extended bad weather.



For CP purposes, a complete system will normally include solar panels in a frame system (array), an output controller, batteries, a battery enclosure, structural members, wiring and hardware. In addition to these items, a security

fence system may be advisable, and of course, the required CP system materials. Keep in mind, however, that a conventional CP rectifier is NOT required as the system provides DC power.

As with a CP rectifier, a solar powered CP system must be properly sized for voltage and current output. However, choosing the correct size for solar power is more important when you consider that the cost of every watt of DC power increases the size of the system. That means an increase in the number of solar panels, batteries and other associated components.

Another important consideration is the physical location of the system. In sunny areas of the world, say Southern California as an example, sunlight is plentiful and the physical size of the system can be somewhat smaller as compared to other areas where there is less available sunlight. In those instances, the system size must be increased, especially the number of batteries, as they provide DC power through periods of darkness or diminished light.

Battery autonomy must also be considered in the system design. In other words, this is the period of time where the batteries only must supply power to the CP system without being recharged by the solar panels. A common or standard selection is three to five days of autonomy. However, if the system is designed for use in areas where poor weather is common, greater periods of autonomy might be a viable option.

Solar power has been used for many years in cathodic protection dating back to the 1970's when Farwest installed hundreds of small systems to protect well casings. Today, array and battery efficiency has improved, making solar power a strong alternative where grid power may not be available.

LTR Portable Test Rectifier

The model LTR CP power supply is a rugged air cooled rectifier used for a variety of testing scenarios. The unit is very powerful and lightweight, providing up to 50 volts and 50 amps maximum DC output while weighing under 25 pounds. A digital interrupt allows for easy user control of On and Off time settings.

Features:

Portable Power - DC output up to 50 volts and 50 amps of on-site power.

Under 25 Pounds - Utilizes advanced Switch-mode Converter Technology to provide a lightweight portable test rectifier weighing in at under 25 pounds.

Rugged and Durable - This case is rugged and durable with a comfortable carrying handle and padlock feature to lock the case while testing.

Compact Design - 22" Length x 9" Height x 14" Width.

Output Interruption - Advanced control for output interruption provides the user with unlimited On and Off time configurations.

Test Points - Current and voltage measurement points are provided on the front panel.

LED Displays - Easily visible LED displays, even when used in direct sunlight.

NEW



[Click here for more info on the LTR Portable Test Rectifier](#)

Farwest Corrosion Control Company

Integrity - Service - Quality

... Since 1956

Locations Nationwide

Toll Free: 888-532-7937

www.farwestcorrosion.com

NEW Introducing the RefCheck Plus

Designed to verify the health of a permanent or portable cathodic protection reference electrode (CPRE) & enable your DMM to obtain an accurate reading.

The Ref-Check PLUS is two instruments in one. It contains the original Farwest Ref-Check device, which allows a CP technician to determine if a CPRE is healthy (not high resistance). If the CPRE is found to be compromised, the technician can then easily utilize the new electronic circuitry of the Ref-Check PLUS to obtain an accurate potential measurement from compromised CPRE's that previously indicated as high as a 90% error.



Benefits of the Ref-Check PLUS

By using the Ref-Check PLUS, you can extend the service life of compromised CPREs and be confident that the CPRE is providing a proper reading.

The Ref-Check PLUS pays for itself on the first day you're able to obtain an accurate reading from a compromised CPRE that you no longer need to replace.

Features include:

- Does not load the CPRE circuit
- Extends the useful life of permanent reference electrodes
- Ensures accuracy of portable CPRE's
- Eliminates undetected measurement errors
- Long battery life and easy to use

[Click here for more info on the Ref-Check PLUS](#)

Farwest Expansion and Personnel Additions

Over the last six months, Farwest has expanded and celebrated the following locations:

Houston, TX - Gulf Coast Region - We celebrated our 4th anniversary in the Houston



area where we offer an expansive product line as well as technical and installation services. In addition, we are producing many CP products at this location so you can obtain custom, made-to-order products from a local, reliable source. Lead by Russell Widner, we are proud of the accomplishments of our Texas team and for being a strong resource in the Gulf Coast Region. Recent additions to our team include Bart Davis and Jodi

Miller, who join Justin Karn in business development. All three individuals are available to assist current and future clients in the Gulf Coast Region. Our team can be reached by calling 281-446-9558 or by email at sales@farwestcorrosion.com.

Chicago, IL - Great Lakes Region - Dan Ruane has joined Farwest and will be opening our new office and warehouse facility in the Chicago area where we are presently looking for a suitable location. Once established, Dan will be the Regional Manager for the area and in support, Jim Dooley will join him as our Business Development Specialist for the region. Farwest will be offering local inventory and technical services to clients in the Great Lakes Region. As soon as a site is selected, that information will be provided. In the meantime, Dan can be reached at 708-222-7902 or druane@farwestcorrosion.com and Jim at 708-222-7354 jdooley@farwestcorrosion.com.



Dan Ruane

Philadelphia, PA - Northeast Region - We also celebrated our 4th anniversary in the Philadelphia area. Many of you already know Laura Bauer, our Northeast Regional Manager, who oversees a large inventory of CP and corrosion related products. Recently Dave Krause joined Farwest in our PA location and is working to introduce Farwest to new customers in the region. Dave's experience in the industry makes him a valuable technical resource and we're very pleased to have him aboard.

This location also offers technical services and assists many regional clients with their CP needs. Laura and her team can be reached by calling 215-579-1732 or by emailing them at sales@farwestcorrosion.com.



David Krause

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