FARWEST CORROSION CONTROL COMPANY

# The Corrosion Monitor

Newsletter: Volume 6 - Summer 2012

## Topics



## Design Considerations In Utilizing Sacrificial Magnesium Anodes For Newly Buried Pipelines. A Discussion By Senior Corrosion Engineer, John Bollinger, (as published in World Pipeline magazine)

Often customers ask to have a sacrificial magnesium anode cathodic protection (CP) system designed for their new pipeline system. In many cases, however, the customer does not understand the many complexities that can profoundly affect the design and long-term operation of the CP system. Mistakenly, they think that the application of a few magnesium anodes along the length of the pipeline will offer sufficient protection but unfortunately, this is usually not the case.

In designing any CP system for a buried pipeline, there are a number of factors that must be considered. These factors are even more critical when considering a sacrificial anode system, which cannot be adjusted to provide additional CP if needed. Therefore, a robust design approach and careful installation techniques are a must if the CP system is to provide the expected results. Otherwise, the integrity of the pipeline may be at stake for a number of reasons described later.

As mentioned above, there are many design elements to be considered that include pipeline coating type, coating effectiveness or efficiency, electrical isolation of the pipeline, soil resistivity and moisture content, operating temperatures of the pipeline, cathodic interference, induced AC voltages from power lines, lightning strikes, operational issues caused by pigging or similar, and the required service life of the CP system.

The basis of any CP design requires knowledge, or a competent estimate, of the amount (area) of bare steel that will be exposed to the soil. In a perfect scenario, a pipeline would have a 100% flawless coating. If this were possible, there would be no need for CP as there would be zero contact of the steel with the earth and therefore no possibility of corrosion.

This is an unrealistic expectation due to the inevitable nicks, scratches (called coating holidays) and possibly less than perfectly coated field joints. Therefore, it is up to the CP designer to estimate the coating efficiency for the pipeline in order to calculate the amount of CP current needed to adequately protect the pipeline.

As an example, how does a 99% efficient coating sound? The vast majority of people might agree that a 99% efficient coating would be a relatively good effort. However, consider a requirement or specification to coat a structure that is 10 ft x 10 ft, or 100 ft2 in total. A 99% efficient coating would mean that 1 ft2 of the surface area was missed and is now bare. In the author's opinion, a new coating with even 99.9% coverage should be considered unacceptable.

*This full featured discussion is continued on our website... Click Here*

### *New Thermal Insulating Coatings by Mascoat*

Farwest Corrosion is now distributing the Mascoat line of premium composite ceramic insulating coatings that are designed to provide a thermal

insulating and corrosion barrier for a variety of above ground applications. These include piping, storage tanks, process equipment, heat exchanges, and more. Applied directly to many substrates (requires a primer on steel), these insulating coatings help solve problems such as condensation build-up, corrosion under insulation (CUI), personnel burns, and energy loss. Products are easily applied via airless sprayer and clean-up is achieved with soap and water.

## Farwest & Deepwater Strengthen Alliance

Farwest has been a long-time distributor for Deepwater Corrosion's NuBolt & I-Rod product lines, and the two companies have recently agreed to strengthen their relationship even further. Deepwater wants to obtain a larger distribution footprint and enhanced customer service contacts in the U.S., so Farwest will be increasing inventory at its eight locations as well as upgrading marketing and sales efforts for I-Rod products.

Corrosion at pipe supports is one of the leading causes of process piping failures, which can have potentially catastrophic results. All styles of pipe supports – including beam supports and pipe saddles – create crevices where water is trapped and held in constant contact with the pipe's surface. Once corrosion is initiated in these pockets, it can quickly undercut the paint film and cause rapid wall loss. Entire sections of pipe can fail and require replacement if these conditions are not addressed.

Deepwater developed the I-Rod pipe-support system specifically to combat this corrosion problem and ensure longer, safer lives for pipelines by eliminating crevices between pipes and supports.

The Nu-Bolt assembly, which consists of one piece of pre-cut I-Rod fitted on a coated U-bolt with four nuts, provides corrosion protection at I-beam supports. I-Rod is also available as I-Rod Clip for protection at pipe saddles.

See more at:
http://www.farwestcorrosion.com/fwst/insulate/nu-bolt01.htm

# Farwest Company News

### Farwest Moves to New Pacific Northwest Location

We're pleased to announce that on July 1, 2012, Farwest moved it's Pacific Northwest location from Everett, WA to 4640 Campus Place, Suite 105, Mukilteo, WA 98275. Our current phone number, (425)290-8832, has traveled with us so there will be no change there.

The new location has just over 9,000 square feet of warehouse and office space and will be used to maintain a large inventory of cathodic protection and corrosion control related products. This new location is key to our goal to provide future and existing clients in the region with a comprehensive local inventory.

### Marnie Rankin Promoted to C.O.O.

Marnie Rankin was recently promoted to Chief Operating Officer and is the majority owner of the company. Marnie joined the company in 1973 and has held many roles and responsibilities including General Manager of the Corrosion Control Products division of Farwest. As that division was merged into Farwest, Marnie is now responsible for all company operations as well the future growth of the company.

### Trey Bedford Joins Farwest's Tulsa Operation

Trey Bedford has joined the company as a Business Development Specialist working from Farwest's Tulsa, Oklahoma location. Trey will be responsible for developing and maintaining new business accounts in the Midwest region of the U.S. With an extensive background and history with a notable industry supplier, Trey will be a great asset to the Farwest clients in the region.

### Tom Bussard Joins Farwest in Rocky Mountain Region

Tom Bussard, a NACE certified CP Specialist, has joined Farwest's operation in Denver, Colorado. With his 26 years of experience in cathodic protection engineering and installation work, Tom will help us to offer new services and solutions in the Rocky Mountain region of the country.

### New Personnel Join Engineering Team in So. California Office

Anthony Bartlett, a NACE Certified CP-1 Corrosion Tester, has joined our engineering group. Anthony served six years in the U.S. Army and was selected to participate in the NACE Workforce Development Program, where he received his Basic Course and CP-1 training. He is now working on a variety of cathodic protection projects in the Southern California region.

Jorge Gomez, a NACE Certified CP-2 Cathodic Protection Technician, has also joined our engineering group at our headquarters in Gardena, CA. Jorge has approximately 5 years of cathodic protection experience, primarily in the water industry and will help provide engineering and technical services to our growing list of clients.