

The Corrosion Monitor

Newsletter: Volume 3 - Winter 2010/2011

Topics

A/C MITIGATION
Overcoming Project
Challenges

NEW GULF COAST
Operation Now Open:
Farwest Houston

PROFILE TECHNOLOGY:
Finally, a way to see inside
of your pipeline casing

Power Lines Over Pipelines = "Potential" Problems

It is common practice in the United States for buried pipelines and overhead power lines to share the same land corridor or right-of-way. Although this makes for a practical use of land and space for the various energy, utility, and pipeline companies, it does present certain challenges and issues that need to be addressed. One such issue is the induction of AC voltage from the overhead power lines to the buried pipelines below. Induced voltage on the pipeline can readily appear in levels high enough to cause serious injury or death to individuals who may come in contact with any above ground portions of the system, such as valves, test stations, or other appurtenances. Clearly, serious safety considerations must be given to any such situation to protect the personnel, operators, and general public who may come in contact with the pipeline. The solution to this issue is a



properly designed AC mitigation system. AC mitigation systems help to equalize the potential between the pipeline or structure and the local soil surfaces. Although the voltage is still present, the shock hazard (or 'touch potential') is greatly reduced.

In spring of 2010, Farwest Corrosion was approached by a large utility company to fast track the installation of an AC mitigation system along 11 miles of pipeline in the desert where a 230kV electrical transmission line had been installed. A third party engineering firm was responsible for the design of the system which included two grounding wells, station grounding at three locations, installations of 135 test stations and multiple locations where the pipeline came above ground and spanned across natural run-offs and dry creek beds. The design utilized 8' x 8' Plattline II Standard zinc ground mats and Plattline II Standard zinc ribbon at each location in conjunction with a Dairyland 1.2 KA Solid State Decoupler (SSD). The SSD's were used to act as a ground mat decoupler to separate the zinc mats and ribbon from the existing pipeline impressed current cathodic protection system while still providing the required over-voltage protection on the pipeline.

New Houston Office Opens for Business

We're very happy to announce that Farwest is expanding to the Houston Texas area in order to better serve present and future clients in the Gulf Coast Region. Our roots are in Texas, as Farwest was originally started by Mr. Wayne Broyles of Wayne Broyles Engineering of Houston, Texas way back in 1956.



Our new 9,100 square foot office and warehouse is located at 1714 Rotary Drive in Humble, Texas and will be utilized to maintain a large inventory of cathodic protection and corrosion related materials and equipment. Future plans will be to offer cathodic protection technical services once we are established in the region.

Heading our new operation will be Mr. Russell Widner, Gulf Coast Regional Manager. Russell re-joined Farwest in December 2010 after a two-decade absence from our company. During his twenty-plus year career, Russell has gained a wealth of experience and knowledge in the corrosion industry and will be a great asset to our clients and our success.

AC Mitigation continued...

Although the various aspects of the system installation was relatively simple and well within our construction department's capabilities, the project itself presented many challenges along the way that made the project deadline especially daunting. One challenge was the issue of material lead times. Large quantities of material were required from both, The Platt Brothers & Co. and Dairyland Electrical Industries, in a very short time-frame. Because the quantities exceeded the vendor's available stock, materials had to be delivered in phases. This required working closely with our vendors with careful coordination and scheduling of the installation locations to keep the installers working while maintaining the critical deadlines.

Another challenge was simply the act of moving equipment around the project. The pipelines involved with the project were located in an environmentally sensitive location. Our crews were required to have special training regarding the various protected species of plants and animals in the area. Any activity on the project required an escort and close monitoring by one of the three assigned project biologists. This made something as simple as getting additional materials from one location to another a sometimes difficult and time consuming task.

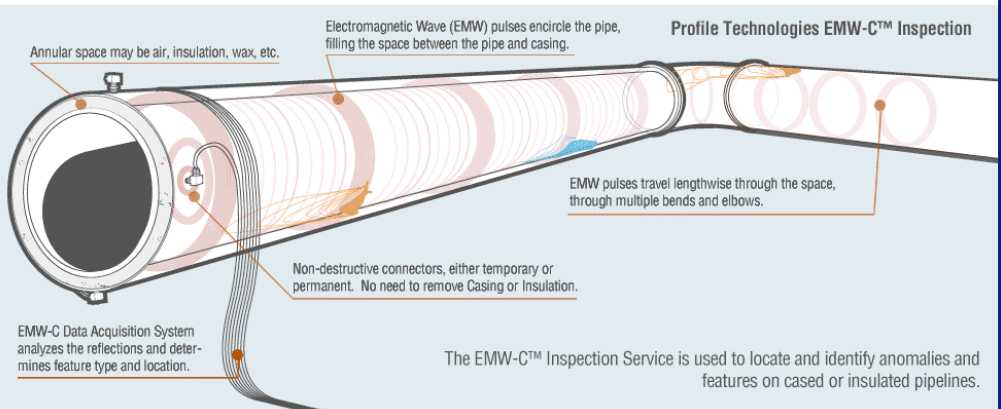
In the end, along with the two deep grounding wells, Farwest installed over 230 Plattline zinc ground mats, 3,000 linear feet of Plattline zinc ribbon and 160 Dairyland SSD's. Despite the many challenges along the way, Farwest finished the project on time and within budget, concluding another successful project.

New Casing Monitoring Technology

Farwest Corrosion Control has partnered, as a mainline distributor, with Profile Technologies, Inc., who is the developer of proprietary long range electromagnetic pipeline corrosion inspection technologies.

This new technology has proven to be very useful for the real-time monitoring of wax fill projects on underground pipeline casings and provides clients with very detailed information about the casing and the status of the fill. This information includes:

- Identification of water or other problems in the casing
- Locations of electrical shorts, if any
- Wax fill progress and real-time information as to wax voids or other potential issues
- Wax fill volume during and after the fill
- Monitoring of the casing for fill volume and other potential issues for the life of the casing



Profile Technologies EMW-C™ equipment and permanent connectors installed on the pipeline and casing will allow monitoring of the casing as described above. The installation of the permanent connectors is done prior to a casing fill and the cabling is terminated at a test station or similar location. With the connectors in place, Profile's software will provide a graphical view to watch for any potential problems while a digital readout registers the percent of volume filled until completion.

The US Pipeline Hazardous Materials Safety Administration (PHMSA) has recently provided guidelines for the preparation, filling and monitoring of wax fill inside pipeline casings. The Profile Technologies EMW-C™ is a single, long-term solution for meeting the requirements of the guidelines using this new patent pending technology.

Contact our sales department for more information about this new and important technology or visit www.pipelinecasings.com

Breaking News... On Wednesday evening, March 16, 2011, Farwest will host a celebration at the *Houston Livestock Show and Rodeo* in conjunction with the *2011 NACE Expo & Conference*. If clients are interested in attending the celebration, please send an email to jpeterson@farwestcorrosion.com so we can send you a formal invitation. As our guest, you will enjoy dinner, drinks, the best rodeo in Texas and a concert by country singing star *Miranda Lambert*, all in celebration of our expansion into the Gulf Coast Region.

Farwest Corrosion Control Company
Integrity - Service - Quality
... Since 1956

Nine Locations Nationwide

Toll Free: 888-532-7937

www.farwestcorrosion.com