

MP Corrosion Innovation of the Year Awards Nomination Form for 2021

Additional Nominee's Name:

Job Title:

Organization:

Mailing Address:

City: State: ZIP/Postal Code: Country:

Telephone:

(If outside the United States and Canada, please include country code)

E-mail:

Is this the primary contact for the Award program? Yes No

Additional Nominee's Name:

Job Title:

Organization:

Mailing Address:

City: State: ZIP/Postal Code: Country:

Telephone:

(If outside the United States and Canada, please include country code)

E-mail:

Is this the primary contact for the Award program? Yes No

NOTE: The above contact information will not be made public except the nominees' names, job titles, and organizations. However, all information submitted on the following pages will be submitted to the panel of corrosion experts and posted on the MP Corrosion Innovation of the Year Awards web site.

2021 Award Nomination

Title of Innovation:

(insert title here—no more than five words)

Nominee(s):

(insert Name[s] and Organization[s])

Web site:

Summary Description:

PG&E experienced a near-miss when an exothermic weld was applied by a corrosion mechanic on what was believed to be a steel service line to a customer. The service had been converted to plastic pipe and the existing steel piping had been utilized as a conduit to avoid disruptive trenching across the customer's property. Upon discovery of the mistake, the service was excavated and significant damage (melting) was found on the plastic gas line. Follow up testing was performed in a controlled

MP Corrosion Innovation of the Year Awards Nomination Form for 2021

Full Description

(Please provide complete answers to the questions below. Graphs, charts, and photos can be inserted to support the answers.)

1. What is the innovation?

Use of a strong magnet in combination with a conductive epoxy to provide a permanent test lead connection without any heat applied to the pipeline.

In addition to the actual connection to the pipeline, Accurate Corrosion also developed a system to allow for the NotHot™

2. How does the innovation work?

The pipeline is prepared for a test lead connection in the normal way, coating removed and cleaned for a connection. The two-part conductive epoxy is then mixed and applied to the NotHot™ saddle, which is then set on the cleaned pipe. The magnet holds the NotHot™ saddle in place while the conductive epoxy cures. The system can be coated with standard pipe coating in accordance with operator requirements. There is an optional extendable pole to install the NotHot™ as a keyhole

3. Describe the corrosion problem or technological gap that sparked the development of the innovation. How does the innovation improve upon existing methods/technologies to address this corrosion problem or provide a new solution to bridge the technology gap?

Common methods of attaching test leads utilize heat to make the connection which is not always desirable due to concerns about impacts to the underlying piping and/or ignition concerns. Mechanical clamps can be problematic over time and introduce error into measurements due to an increase in the resistance between the test lead and the pipe. In addition, mechanical clamps are generally not suitable for keyhole applications.

4. Has the innovation been tested in the laboratory or in the field? If so, please describe any tests or field demonstrations and the results that support the capability and feasibility of the innovation.

Yes. Extensive laboratory testing was performed to select the optimum shape and curvature of the saddle so one size will fit any diameter pipeline. A Defelsko PosiTest ATA pull-off adhesion tester was utilized with 10mm dollies to evaluate various conductive epoxies. An ABEM SAS-1000 Terrameter was utilized to measure conductivity of various conductive epoxies. Approximately 20 NotHot™ connections have been installed by the keyhole method and field tested.

5. How can the innovation be incorporated into existing corrosion prevention and control activities and how does it benefit the industry/industries it serves (i.e., does it provide a cost and/or time savings; improve an inspection, testing, or data collection process; help to extend the service life of assets or corrosion-control systems, etc.)?

The NotHot™ connection can be used in place of other methods of test lead installation. It is of particular value for the following applications:

- 1. When there is concern for the possibility of damaging a known or unknown inserted plastic pipe.**
- 2. When there is concern that the heat generated by conventional methods (exothermic welds / pin braze) may affect the steel**

6. Is the innovation commercially available? If yes, how long has it been utilized? If not, what is the next step in making the innovation commercially available? What are the challenges, if any, that may affect further development or use of this innovation and how could they be overcome?

Yes. NotHot™ became available in March 2020.

7. Are there any patents related to this work? If yes, please provide the patent title, number, and inventor.

Patent Pending

Title: TEST LEAD ATTACHMENT ASSEMBLY FOR METAL PIPES

Docket No.: 4365-P4

UNITED STATES TRADEMARK APPLICATION NO. – 88826715