



**NACE**  
INTERNATIONAL

**SAN FRANCISCO**  
**SECTION**

**Please Join Us... April 12, 2016**

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**Date**

**Tuesday, April 12th**

**Location**

**Zio Fraedo's Restaurant**  
611 Gregory Lane, Pleasant Hill, CA.  
(925) 933-9091

**Time: No Host Bar 5:30 pm • Dinner 6:30 pm • Program 7:15 pm**  
**Cost: \$15 NACE members, NACE retirees, and students.**  
**\$25 non-members**

*Please RSVP by Thursday, April 7th by email to Michelle Anderson at [mlanderson@corrpro.com](mailto:mlanderson@corrpro.com), or by phone at (510) 381-1414.*

*Cancellation deadline is Friday, April 8th.*

**Location / Directions: Please see attachment "Meeting Location"**

**Induction Heating Technique for Cold Weather Pre-Heating and Post-Curing of Liquid Epoxy Coatings on Gas Pipeline Girth Welds**

*Bruce Wiskel, P.E.*

*Pacific Gas & Electric Company*

During the winter of 2013-2014, Northern California experienced unusually cold temperatures (below 40°F), which delayed Pacific Gas & Electric Company (PG&E) coating operations on new pipelines. Liquid epoxy coatings capable of being applied and cured at temperatures below 50°F were not approved, compelling PG&E to control the environment using small enclosures over the application area. This approach was expensive and time consuming. In early 2014 the PG&E Corrosion Services Group initiated a program to research and develop a solution for cold weather epoxy coating application. Induction heating proved to be the most effective way to heat the pipe substrate, and accelerate coating curing after application. Induction heat is well controlled, localized, and does not damage the adjacent coating. It is capable of quickly raising and maintaining elevated surface temperature that improves epoxy coating cure time and working time on girth welds, thereby increasing quality and lowering cost. This presentation will introduce the PG&E induction heating program and how it has revolutionized cold weather epoxy coating repair on metallic gas pipes.

**Bruce J. Wiskel** has been a practicing corrosion engineer for over 30 years. He was a partner and owned a major corrosion protection company for over 14 years. He was a managing director, V.P. and President for several divisions of a major corrosion protection company over a 17-year career. Bruce has been the expert corrosion engineer for PG&E for over 2 years. He has called three countries home and has worked on corrosion protection projects in over 20 countries. He holds a B.S. degree in Metallurgical Engineering from the University of Alberta and a Business Management Certificate from the University of Calgary. His is a registered professional corrosion engineer (P.E.) in California, a registered professional engineer (P. Eng.) in Alberta, Canada, is a NACE CP 4 cathodic protection specialist, and a NACE CIP 1 coatings inspector. Bruce has published and lectured extensively around the world. He was a lecturer for the University of California and is presently a NACE CP instructor.

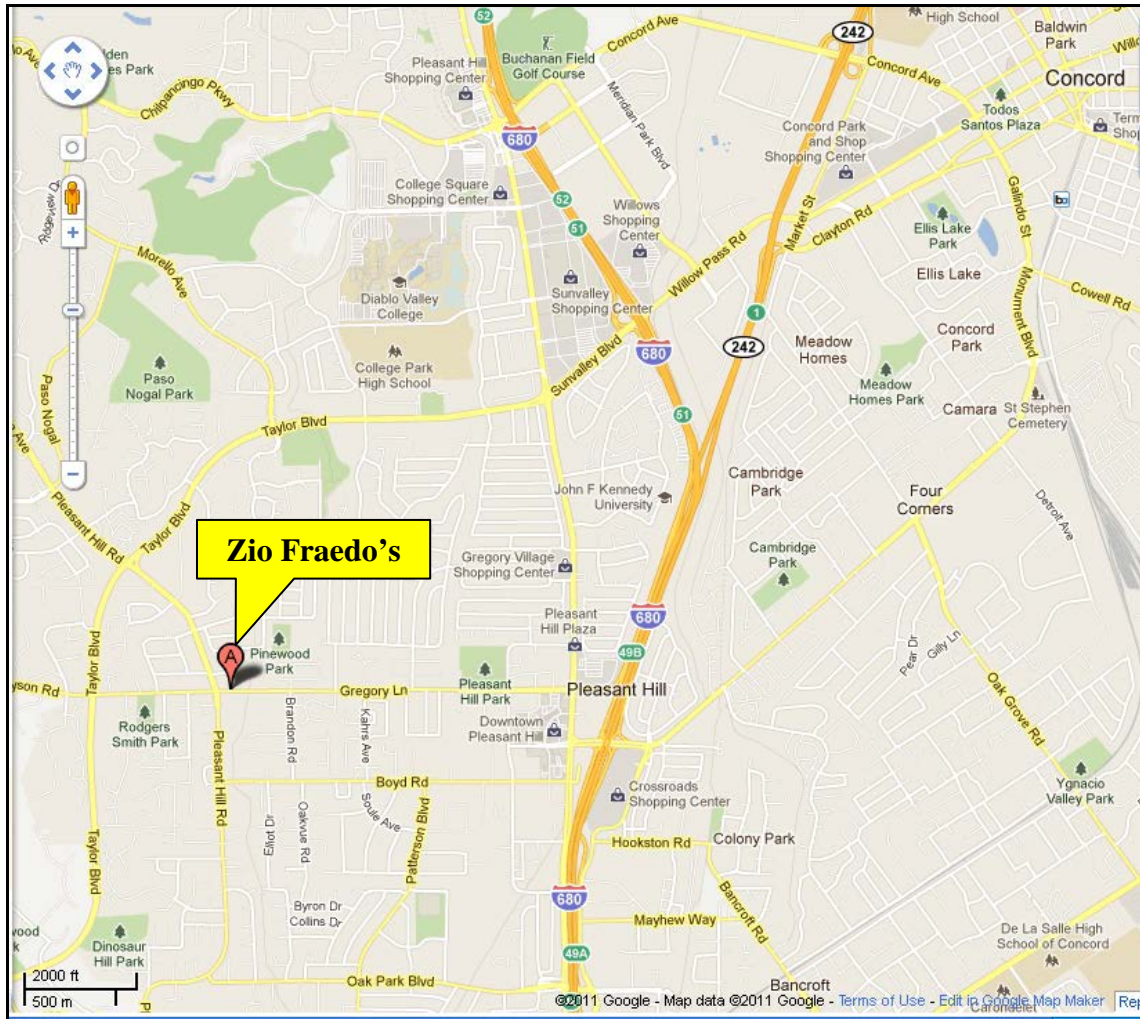


# NACE INTERNATIONAL SAN FRANCISCO SECTION

**MANY THANKS TO OUR 2015 SPONSORS!!**



## San Francisco Bay Area Section Meeting Location and Directions



**Zio Fraedo's Restaurant, 611 Gregory Lane, Pleasant Hill, CA. 925-933-9091**

### Directions

- Take I-680 north to Contra Costa Blvd. Exit 49A in Pleasant Hill and drive north. Pass Monument Blvd. then turn left onto Gregory Lane. Pass Brandon Rd. on left in 1 mile. Look for Zio Fraedo's on the right just before Pleasant Hill Rd.
- Take I-680 south, exit at Sun Valley/Willow Pass Rd. Drive west and turn left on Contra Costa Blvd., then right on Gregory Lane. After 1 mile drive past Brandon Rd. on the left; Zio Fraedo's will be on the right before Pleasant Hill Rd. intersection.