CURRICULUM VITAE
OF
MICHAEL J. O'NEIL, P.E.

REV: June 7, 2007

Services: Consultation in Metallurgy, Welding Engineering and Failure Analyses pertaining to engineered structures and/or equipment relating to electrical and mechanical apparatus as used in the utility (both electric and gas), transportation, oil pipeline and heavy construction industries.

Office: 418 Montecito Blvd., Napa, CA 94559: Phone (707)224-8204; Cell (707)225-7917; E-mail; mojowrkn17@yahoo.com

Personal: Born November 17, 1944, Brisbane, Australia; US Citizen
One daughter, Katie O'Neil (Shelby), born March 2, 1979
One son, Corey O'Neil, born November 2, 1981
Married to Jackie Lynn O'Neil

Military Service 1965-1969:

United States Navy, Patrol Squadron, VP-42 – Anti-Submarine Warfare Squadron. Jezebel Operator/Radioman. Stationed at NAS Whidbey Island, Washington; two tours in Viet Nam

Formal Education:

High School: Pioneer High School, Whittier, CA
Graduated 1962

College: Cal Poly, San Luis Obispo. Graduated 1975
BS-Metallurgical Engineering with a Minor in Welding Engineering
Senior Project: Honorable Mention Design Achievement Award, Lincoln Electric Co.- Cleveland, OH. Developed an inert gas welding process for welding titanium alloys.

1997 Root Cause Failure Analysis Methods – Reliability Associates;

Three day course, outlining failure trees, symptoms and corrective action.

1999 Root Cause Failure Analysis Principal Analyst – Reliability Associates

Five day course outlining RCFA process from initial failure through data gathering, failure trees, component analysis, testing, determination of "root cause" and corrective action.

Professional Status:

Registered Professional Engineer, CA; Metallurgical Engineering, #1815
Engineer - In - Training, 1984, #XE106824
American Welding Society, CWI #81090351

Academic Appointments and Positions:

Research for Coast Metals: Developed an improved welding procedure for Detroit Diesel for hardfacing engine valves, 1973

Developed a welding procedure for Electric Boat, Groton, Connecticut for Trident Submarine muzzle seal rings for the missle silos, 1973

Student Teacher in Metallurgy Department, Cal Poly, for Ferrous Metals Lab, 1974

Seminars, Symposia and Lectures Presented:

Statistical Approach to Supplier Selection, IEEE Western Power Conference, 1988.

Metallurgical Engineering Activity:

Mechanical Testing, fuel cells for the Apollo Space Project, 1963
Mechanical Testing, re-entry tiles for the Apollo Space Project, 1963
Mechanical Testing, Matterhorn Bobsled Ride, Disneyland, 1965
Consulted with Amp/Toronto on 750mcm copper fired wedge connectors pertaining to heat treating issues.

Welding Engineering Activity:

Welding joint design and procedure qualification for Exxon 1,000 ft platform, 1975

Welding joint design and procedure qualification for Sedco Semi-submersible oil platforms (2), 1976, 1977
Welding joint design and procedure qualification for Exxon Henry 250 ft. platform (Santa Barbara Coast), 1976
Welding joint design and procedure qualification for SDG&E (SEMPRA) Jack up barge at San Onofre Power Plant, near San Diego, 1977
Welding joint design and procedure qualification for Elk Hills pressure vessels (2), 1977
Welding joint design and procedure qualification for 500 ft single point mooring (Santa Barbara Coast), 1978
Welding joint design and procedure qualification for Helms Pumped Storage Project for PG&E, 1978
Welding joint design and procedure qualification for Trident Missle Tubes for US Navy/Westinghouse, 1979
Welding repair oversight, Helms Pumped Storage Project, spiders, turbine mounts and other associated Equipment at Westinghouse, 1981
Welding oversight and procedural qualification of Lost Canyon Penstock reconstruction at Helms Pumped Storage Project, Chicago Bridge and Iron, 1981
S&C Fuse Holder, Interrupter, UT Weld/arcing horn, 2003
HRD trailer tongue welding modifications/glove, 2005
Welding Consultation, ABB/PPI, pole-bolt seam welder, 2006
Welding procedure review and analysis, Valmont Newmark, Monterrey, Mexico, 30% increase in productivity, 2006-07

Failure Analysis Activity:

Reliable 1/0 Deadend Copper Connector corrosion failures, SCC, >30%Zn, 1998
Altec Material Handler boom bearing bolt failure, SCC, 1999
Cooper/McGraw-Edison C Interrupter corrosion failures, $850K, 1999
Kearney Part 73B Cutout re-design due to poor geometry at mounting hole, 2000
Terry Steel manhole lifting hook heat treating problems, 2001
Cooper US Switch, load break interrupter loctite failures of Lexan support stud, 2002
Western Power Products, snatch block fatigue failure, 2003
Terex/Telelect Boom Cracking analysis, redesign, 2003
Pengo Auger failures at Kelly Bar attachment, improper weld, 2003
Level Ride Torsion Bar failure, improper pre-heat/weld failure & joint design, 2003

Ford F-550 rear axle housing cracking study (Dana 5110 rear axle housing), 2004
Ford Super Duty step failures (plastic vs. steel), 2004
Sauber Trailer Failure, 2004
BD-4 Trailer Tongue Failure, improper weight distribution, 2004
Homac Multi-Tap Splice Failures, analysis and redesign, 2004
Bio-diesel fuel tank failure analysis, 2005
Vaca Dixon Sub Mobile, 1T-40.0.2 Autotransformer bearing failure, 2005
Metcalf Mobile Autotransformer corrosion problems, lead, 2005
Moraga Mobile Autotransformer cracked axel analysis, 2006

Engineering Design Activity:

Pole Cargo Trailer design reconfiguration to prevent tipping hazard, 2004
SS vs. Si Bronze grounding lug study, 2004
Sauber Trailer re-design and construction, 2005
Lead Engineer, PG&E Bio-Diesel Project, 2005-2007

PROFESSIONAL QUALIFICATIONS

A total of thirty-two years of professional experience with PG&E and other concerns, during which my job related responsibilities included expertise in the fields of Metallurgical Engineering, Welding Engineering, Quality Control/Inspection Services and “root cause failure analysis. Assignments have required knowledge in the areas of:

1) Statistical process capabilities relating to both product and supplier evaluations.
2) Quality Assurance/Control practices related to electric, gas and fleet product quality.
3) Defect tracking systems, as related to trend and "root cause" failure analyses.
4) Electrical and mechanical equipment, design and testing.
5) Welding Engineering practices and materials selction.

EMPLOYMENT HISTORY

Jan. 1986-Present: Supervising Quality Engineer

Supervision of a Receiving, Surveillance and P.O. Inspection and Quality Control program of both Gas and Electric transmission and distribution equipment/products and Transportation Services Vehicles. The Supplier Quality Team, which I supervise, is

currently staffed by ten quality control inspectors (six of which, including myself, are

registered engineers) and two admin clerks. Results of the inspections, design reviews, "root cause" failure analyses and other associated work conducted in coordination with appropriate engineering and Technical Services personnel, coupled with MPR reviews, have allowed for product/equipment related action items and associated corrective actions, many of which have resulted in improvements in both design and quality to the products/equipment being reviewed. Recent Cost Savings studies have indicated savings to PG&E of $5M in 2003, $1.9M in 2004 and $1.7M in 2005.

My tenure in this position has allowed me to become expert in the field of failure analysis, metallurgical materials, welding design and application and associated testing. I have been asked to work with suppliers in such diverse fields as:

Electric transmission poles,
Large ball and check valves, 16-42"
Fleet related booms and cranes, including strain gage testing and analysis

Failure analyses in conjunction with;
Ford F-550 rear axle housing cracks,
Three reel trailer turrets
Boom knuckle bearings
Structural welding cracks on three reel trailers and trouble trucks

During this period of time I've supervised the development of computer database tracking systems, and initiated quality control programs in the areas of:

- Distribution Electric equipment to include transformers, cable, switches, connectors, etc. (information from the database was used to determine the suppliers whose products would add the most value to PG&E's electric and gas distribution systems for purposes of helping to determine future alliance partners).

- Distribution Gas products to include ball and check valves, plastic pipe and fittings, as well as steel pipe and associated fittings.

- Substation Electric and Electric Transmission transformers, switchgear, steel poles, etc.

- Defect tracking systems, such as MPR, Receiving Inspection Reports and Surveillance Inspection Reports, which have allowed for quick determination of field related and incoming product quality problems, which in turn provide data for both trend and "root cause analyses". MPR is currently being used as a trending tool in the areas of Electric T&D equipment, Gas distribution equipment and Fleet Vehicle issues.

Dec. 1982 -Jan. 1986: Senior Engineer

Supervised an eight person technical review group, responsible for audits of hydro, fossil fuel and geothermal plant designs. These audits were estimated to have in some cases saved PG&E as much as $2M. Of particular note, was our participation in the Moss Landing Low Load Project.

Nov. 1979-Dec. 1982: Inspection/Welding Engineer

Inspected equipment related to hydro, geothermal, nuclear and fossil fuel projects. Specified both the material and welding requirements for the reconstruction of the Lost Canyon Crossing, at the Helms Pumped Storage Project.

Also rotated to QA during this timeframe (following the discovery of the flip-flop design error at Diablo Canyon, during which time I audited both in-house engineering design documents and supplier facilities in accordance with N45.2, ANSI and other nuclear related requirements.

June 1975-November 1979 Kaiser Steel Corporation, Napa, CA

Welding Engineer supervising approximately 200 welders and supervisors, during the construction of five off-shore drilling rigs, including two semi-submersibles designated for the Cook inlet in Alaska, with other platform rigs placed in Santa Barbara and San Onofre (Jack Up Barge for SCE nuclear plant). During this tenure, we also built the draft tube gates for the PG&E Helms Pumped Storage Project.