



**Causey Engineering
LLC**

Gerald J. Hietpas, PE
President

Causey Engineering LLC

"Forensic and Investigative Services"

PO Box 341057-0018

Austin, TX 78734

www.CauseyEngineering.com

Phone & Fax (512) 261-3930

jhietpas@austin.rr.com

Curriculum Vitae

MARC MC CONNELL, PE



Mr. McConnell is an Associate of Causey Engineering, LLC. Causey Engineering has for over 25 years been providing forensic and investigative engineering services and litigation support, specializing in industrial and construction engineering, operations, safety, patents, and regulations. Mr. McConnell is a Chemical Engineer with particular experience in refining hydrocarbons.

Education:

**Stephen F. Austin State University,
Nacogdoches, TX**

BS Environmental Science - 1975

Lamar University, Beaumont TX

BS Chemical Engineering - 1978

Texaco Training,

Management of Change Work Process
Training - 2007

Specialized Training

Put It In Writing – 1983
Basic Financial Management – 1985
Managing for Productivity – 1987
Negotiating Skills – 1987
Refinery Troubleshooting – 1987
Marple Distillation Seminar – 1992
Root cause Failure Analysis – 1994
Incident Investigation Team Leader – 1995
Managing Diversity – 1997
Ultrasonic Training – 2000
Profile Radiography – 2001
Introduction to Sustainable Development –
2003
DOT Pipeline Operation Regulations – 2007
Incident Command System Hazwoper First
Responder Awareness Level – 2007
Environmental Title 5 RCRA/LOPC/KPIs - 2007

Experience Summary:

Over 28 years of crude oil refining experience with the Motiva (Shell) Port Arthur Refinery. This is a 300,000 BPD sour crude processing plant. Work included Engineering, Production and Maintenance on all refining process units.

Significant Achievements:

- 2004 –Awarded Shell’s Project EarthWatch PBW Fellowship on Maine’s Island Ecology
- 1985 - Received Texaco’s ultimate (Star Performer) performance award from Texaco.

US Patents & Trade Secrets:

- Crude Oil Desalter design (minimize size of vessels).
- Steam Control System & Method (energy conservation)
- Oxygen enrichment of gasoline sweetening (performance enhancement)
- Naphthenic Acid characterization (Trade Secret)

Registrations:

- P.E. - Licensed Texas Professional Engineer
- API 510 – Pressure Vessel Inspection Code
- API 571 – Damage Mechanisms in Refining Industry
- API 577 - Welding Inspection and Metallurgy
- API 580 – Risk Based Inspection
- NACE - (National Association of Corrosion Engineers)

Work Experience:

Causey Engineering LLC, Austin, TX 2009 to Present

Forensic Expert: Provide Forensic and investigative work related primarily to Refining. Causey Engineering provides engineering analysis, governmental regulation investigation and research, accident reconstruction and litigation support primarily related to oil and gas, refineries, chemical and petrochem plants, central power stations, electronic manufacturing, food processing, pulp and paper, lumber manufacturing, industrial construction, and warehousing.

The RustBusters DBA, Woodville, TX 2007 to Present

Consultant: Owner of The RustBusters. Principal mission is to provide API & NACE corrosion training for the Refining industry. Teach training classes for petrochemical inspector to prepare them to take the API certification examinations for API – 571 (Damage Mechanisms Affecting Fixed Equipment in the Refining Industry) and API – 580 (Risk Based Inspection)

Motiva (Shell) Port Arthur Refinery, Port Arthur, TX 1979 – To 2007

Corrosion Engineer:

Provide coaching/mentoring/leadership in pressure equipment safety, integrity, and reliability by implementing programs and procedures to meet industry standards, regulatory requirements, and increase long-term reliability. Duties included:

- Provide technical support to the Pressure Equipment Inspection (PEI) Engineers, Unit Inspectors, Process and Production on Metallurgical and corrosion issues.
- Establish new, and review existing Ensure Safe Production (ESP) limits that may affect degradation mechanisms in process units. Provided overview of changes to inspection strategies based on changes in the process conditions.

- Provide recommendations / education for process corrosion limits for Management of Change (MOC's) and Hazard and Operability Analysis (HAZOP's).
- Conduct Root Cause Analysis and perform solution development for pressure equipment integrity issues
- Utilize risk assessment as a tool in problem solving/decision making for pressure equipment integrity issues and Operations, Engineering, Maintenance, and Inspection (OEMI) Risk Based Inspection (RBI) analysis teams.
- Support and implement Management of Change procedures.
- Develop Corrosion Control Documents (CCD's) and fully assist PEI Inspectors with integrating CCD recommendations into piping and equipment inspection strategies.
- Implement inspection practices in accordance with company engineering standards and industry standards for pressure equipment design, fabrication, repair and inspection including ASME, API, ASNT, AWS and OSHA requirements.
- Develop new PEI guidelines and procedures for compliance with PEI Best Practices and Guidelines (BP&G's), and Alliance standards.
- Support training, implementation, and utilization of Inspection Data Management System (IDMS) to assist PEI Inspectors in developing condition and risk based inspection intervals for piping and equipment.
- Perform code calculations for pressure equipment design and remaining life assessment.
- Developed refinery wide corrosion predictive model that minimized risk, improved plant-wide ability to remain within corrosion limits, and reduced costly lab testing. This model is used to evaluate potential crude purchases, and to schedule crude blending to minimize plant wide corrosion effects.
- Provide direction on Crude Expansion Project (CEP). This is a new, single-train 325 MBPD expansion scheduled to come on-line in 2010.

Project Engineer :

- Feedstock Delivery Coordinator – Developed procedures and systems to achieve reliable feedstock deliveries that met specifications.
- Developed project scope, budget, and schedule to obtain project authorizations

Process Engineer :

- Initiated and implemented the concept of Corrosion Control Documents (CCD's).
- Process Engineer for turn-around planning activities
- Investigated health of the water wash systems throughout the refinery.
- Blending and shipping coordination. Conducted feasibility study for on-line gasoline & diesel blending.
- Environmental waste-water optimization.

Supervisor of Operations:

- Supervised an 18,000 bpd crude unit/asphalt production & sales facility
- Prioritize maintenance activities to suit my operations .
- Administered federal and state environmental regulatory compliance and permitting.
- Resolved community and customer concerns.
- Developed annual budget & strategic plan

Process Engineer :

- General Process Engineering duties on various refining process units.

Community & Team Involvement:

- Head of the Technical Advisory Committee – Developed an Associate Degree program in Corrosion Technology at Lamar University for January 2010.

Presentations, Publications:

- Keynote speaker at Eco-Marathon, Houston, TX – March 2010
- “*Thermography as a Corrosion Tool*” –Presentation at 2010 NACE Convention
- Keynote speaker for the Texas State Math & Science Competition at Lockheed Martin in Ft. Worth, Texas on April 18, 2009
- Keynote speaker for Future City competition in Washington DC, February 2008.
- Proficient public speaker. Under the direction of Shell Corporate Affairs (Houston, Texas) I make presentations to all levels of schools and at various scholastic competitions. Purpose is to encourage students to study math and sciences. Approximately 30 such presentations were made in 2006 alone.
- Involved in numerous company related Sustainable Development (community) projects. Frequently represented the company at civic organization meetings.
- “*RBI Pitfalls*” – Presented at 2006 NACE Convention “*Weak Base Neutralizers for Crude Unit Overhead Systems*” –1998 NACE Convention
- “*Energy Conservation Measures*” – Presented at the 1987 National AIChE Convention.

Use of this CV is prohibited until we have a mutually signed agreement concerning your engagement of Causey Engineering LLC. Pending such, the use of our name is also prohibited, and we reserve the right to accept assignment by others in lieu of your firm.