



**Causey Engineering  
LLC**

Gerald J. Hietpas, PE  
President

**Causey Engineering LLC**

*"Forensic and Investigative Services"*

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**Curriculum Vitae**

**JENNIFER MARRS, MSME, PE**



*Mrs. Marrs is an Associate of Causey Engineering, LLC. Causey Engineering has for over 18 years been providing forensic and investigative engineering services and litigation support, specializing in industrial, utility and construction issues. Mrs. Marrs has particular experience in the field of machine design, manufacturing processes, material handling, consumer products, industrial equipment, tool design, standards, and safety. She also has experience in Semi-conductor(FAB), Clean Room, and electronics manufacturing. Her credentials prequalify her to become a registered Professional Engineer in any state and most U.S. territories.*

**Education:**

**Northeastern University**  
MS, Mechanical Engineering, 1997

**National Academy of Forensic Engineers**  
Seminars on Forensic Engineering

**Worcester Polytechnic Institute**  
BS, Mechanical Engineering, 1992

**Northwestern University Center for Public Safety**  
Accident Investigation 1 & 2

**Ongoing Professional Education**

*Including:*  
Machinery Risk Analysis      Ergonomics  
Thermal Shock of Materials      Lubrication  
Hand-Tool Design      Noise Control  
Project Management      Corrosion  
Failure Modes & Effects Analysis

**OSHA Training**

General Industry Training: Over 28 hours  
*Including:*  
Machine Guarding      Lockout/Tagout  
Ergonomics      Industrial Hygiene  
Confined Spaces      Hazard Communication  
Personal Protective Equipment

**Patents:**

**International Patent Holder** (with four colleagues): WIPO #WO 2004/010474  
"Liquid Flow Controller And Precision Dispense Apparatus And System"

**Registrations:**

**NCEES** - National Council of Examiners for Engineering and Surveying Record Holder  
**PE** – Professional Engineer, currently licensed in New Hampshire and Massachusetts.

## **Work Experience:**

**Causey Engineering LLC**, Austin, TX

2009 to Present

*Forensic Expert:* Provide Forensic and investigative work related to Mechanical Engineering, particularly machine design, manufacturing processes, material handling, consumer products and electronics manufacturing, industrial equipment, tool design, standards, and safety.

**Long View Consulting LLC**, Cornish, NH

2005 – To Present

*Owner & Engineering Consultant:* Provide mechanical engineering services, specializing in machine design, manufacturing process design, industrial equipment, factory automation, material handling, test equipment, gauge design, tool design, fixture design, factory layout planning, capacity analysis, work flow optimization, machinery safety, risk analysis, and documentation. Clients include Proctor & Gamble, Fujifilm Dimatix, and Pompanette LLC.

**TASC Technical Services**, Plaistow, NH

2004 – To 2007

*Consulting Engineer:* Provided mechanical engineering services, specializing in machine design, manufacturing process design, test equipment design, machinery safety, risk analysis, and documentation. Completed a number of projects, including several for The Gillette Company.

**Fujifilm Dimatix Inc.**, Lebanon, NH

2002 – To 2004

*Mechanical Engineer, Manufacturing Engineering - Process Design & Implementation:* Provided Ink Jet Print Head manufacturing process design and support. Processes included Silicon wafer manufacture, chemical treatment, heat treatment, soldering, electronics manufacturing, clean assembly, testing, and packaging. Also responsible for material handling, machine, fixture, workspace, and tool design.

**Sabbatical,**

2001 – To 2002

**Mykrolis Corp.**, Bedford, MA

2000 – To 2001

*Mechanical Engineer, Liquids Dispense R&D Group:* Product Design, R&D, and Manufacturing Process Design for High Precision Chemical Pumps, Flow Controllers, and Dispense Systems. Designed products for use in semiconductor manufacturing, chemical processes, optical disc manufacture, and high purity cleanroom environments. Responsible for product design, cost reduction, reliability testing, performance testing, life testing, characterization, and documentation.

**The Gillette Company**, Boston, MA

1992 – To 2000

*Project Engineer, Engineering & Implementation Group:* Designed and analyzed manufacturing machinery, equipment, and safeguards. Wrote machinery documentation and operator manuals. Performed machinery risk assessment & mitigation. Responsibilities included product engineering, machinery control system design, design for noise control, design for ergonomics & safety, design of pneumatic and detection systems. Supervised build and startup of new equipment, performed functional testing, resolved issues found in debug, and oversaw equipment qualification runs.

### ***Professional Memberships:***

**ASME** – American Society of Mechanical Engineers  
(Executive Committee Program Chair of Upper Valley Subsection)  
**NAFE** – National Academy of Forensic Engineers (Correspondent)  
**NHSPE** – New Hampshire Society of Professional Engineers  
**NSPE** – National Society of Professional Engineers  
**SME** – Society of Manufacturing Engineers  
**NEA4WD** - Northeast Association of 4WD Clubs

### ***Presentations, Publications:***

*(Listed as Jennifer Wiley)*

***“Bearing Forces as a Function of Mechanical Stiffness and Vibration Isolation in a Fourbar Linkage”*** Norton, R. L., Ault, H. K., Wiley, J., Parks, T., Calawa, R., and Wickstrand, M. – Presented at Symposium on Effects of Mechanical Stiffness and Vibration on Wear, ASTM STP 1247, Raymond G. Bayer, ED., American Society for Testing and Materials, Philadelphia, 1995

***“CAD and Mechanism Analysis of a Fourbar Linkage”*** Parks, T. J. Wiley, H. K. Ault, R. L. Norton. Presented at International Aries User’s Group Meeting, May 2-5 1992, Lowell, Mass., pp. 237 – 260

*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.*