
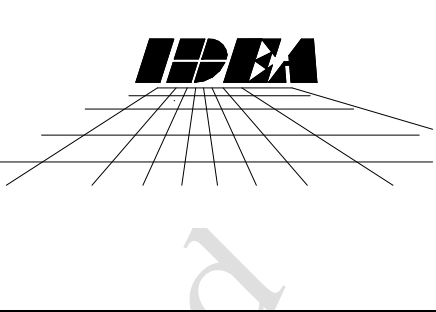


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|  | <p>Curriculum Vitae</p> <p>BRIAN K. SILOWASH, PE, CEM</p> <p>Innovative Design Engineering of America, LLC 1730 Jamestown Place Pittsburgh PA 15235</p> |  |
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SUMMARY OF EXPERTISE:

Professional Engineer, teacher, and speaker, with over thirty years of practical experience in design and construction of complex industrial projects. Areas of expertise include:

- Industrial Piping
- Facilities Engineering
- Industrial Infrastructure
- Mechanical Process Equipment (pumps, compressors, cooling towers)
- Construction Documents
- Damage Assessments following Disasters

Sole author of an engineering manual published by McGraw-Hill in 2010.

EMPLOYMENT:

Innovative Design Engineering of America, LLC, Pittsburgh, PA

July 2002 to Present – President and Founder

- Multi-discipline Engineering Consultant to Metals, Pulp & Paper, Manufacturing, Food & Beverage, and Chemicals industries. Engineering disciplines include Structural, Mechanical, and Electrical
- Process Piping Stress Analysis, including Dynamic Loads
- Chemical Piping
- Structural Design
- Plant Layouts
- Insurance Consulting for Disasters and Equipment Failures
- Energy Conservation
- HVAC

Point Park University, Pittsburgh, PA

January 2004 to June 2015 – Assistant Professor and Lecturer

- Adjunct Professor in Natural Science and Engineering Technology Department
- Junior-level Environmental Engineering Course
- Guest lecturer for MS program in Engineering Management

Eichleay Engineers Inc, Pittsburgh, PA

December 1996 to May 2002 – Senior Engineer

- Mechanical infrastructure for \$1.1 billion steel processing mill at AK Steel – Rockport, IN
- Casthouse Baghouse for USS – Fairfield, AL
- Plant layout, piping, and HVAC for PPG – Flint, MI
- Hot Band Improvement Project for Dofasco – Hamilton, Ontario
- Vacuum Pumps for GE Specialty Chemicals – Morgantown, WV
- Field engineering for Solvay Paperboard – Syracuse, NY

Lockwood Greene Engineers, Dallas, TX

March 1995 to November 1996 – Project Engineer

- Project Engineer and Construction Manager for \$450 million steel mini-mill for North Star BHP Steel – Delta, OH
- Mechanical infrastructure
- Large-bore Underground Piping
- Oxygen Piping
- High-Pressure Descaler Piping
- Electric Overhead Traveling Cranes Construction Manager
- Major Equipment Specifications
- Piping Specifications

Dean Oliver Engineering Consultants, Tucker, GA

January 1990 to February 1995 – Senior Mechanical Engineer

- Recovery Boilers for Riverwood Pulp & Paper – Macon, GA and International Paper – Natchez, MS
- Evaporator Set for Crestbrook Forest Industries – Skookumchuck, BC
- Tall Oil Plant for Union Camp Chemical – Savannah, GA
- Continuous Blowdown Line for Inland Rome – Rome, GA

Grenzebach Corporation, Newnan, GA

September 1988 to December 1989 – Project Engineer

- Machine design for OEM supplier of material handling equipment for the Glass Industry

Kimberly-Clark Corporation, LaGrange, GA & Roswell, GA

February 1984 to August 1989 – Staff Engineer & Area Engineer

- Nonwovens engineering design
- Production engineering support of nonwovens equipment.
- Hot oil calender system design and startup
- Unwind system design and startup
- Compressed air systems design and startup
- Pellet blending systems
- Chemical treating

United States Steel Corporation, Clairton, PA

August 1981 to October 1983 – Maintenance Foreman/Engineer

- Coke Batteries
- Chemical piping

PROFESSIONAL ENGINEERING REGISTRATIONS:

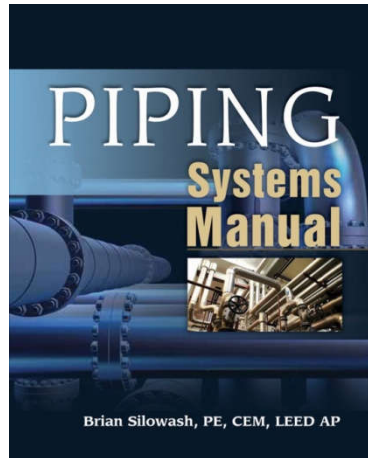
- Georgia (18156)
- California (M27645)
- Alabama (20010)
- Pennsylvania (053242-E)
- Ohio (80426)
- New York (96666-1)
- Florida (80816)
- NCEES (13058)

PROFESSIONAL AFFILIATIONS:

- National Fire Protection Association

PUBLICATIONS:

- *Piping Systems Manual*, McGraw Hill, 2010
- *Emergency Preparedness for Business*, Manufacturing.net, June 27, 2007
- *Installing VFD Reduces Costs and Noise*, Plant Engineering, November 9, 2004



EDUCATION:

- BS Mechanical Engineering, Pennsylvania State University, University Park, PA – May 1981
- BA Mathematics, St. Vincent College, Latrobe, PA – May 1981

CERTIFICATIONS:

- Certified Energy Manager (Association of Energy Engineers)

MANUFACTURING EQUIPMENT:

Pumps, valves, pipe supports, bearings, overhead cranes, hydraulic systems, lube oil systems, recovery boilers, power boilers, calenders, air compressors, evaporators, scrubbers, baghouses, centrifuges, coke ovens, electric arc furnaces, continuous casters, rolling mills, steam & condensate systems, rotary joints, pneumatic conveying, extruders, seals, rotating equipment, HVAC, steam turbine generators, ducts, chillers, fall protection, ...