



WYLIE WONG, P.E., CGE
SENIOR STAFF CONSULTANT

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Mr. Wylie Wong is a member of the Biomechanics and Safety practice group at ESi. His areas of expertise are mechanical engineering, product safety and design, and product and workplace accident analysis and reconstruction. He has assisted clients in product safety designs, evaluation and development of user manuals and instructions, product warnings, hazard analysis, risk assessments, product accident investigations, and workplace accident investigations (such as machine guarding and lockout/tagout).

Mr. Wong was employed at Weber Inc. as a test engineer and gas train design/project engineer supporting existing products and new product development. He has used statistical process control, design of experiments, computational fluid dynamics, hazard analyses, and consulted gas safety standards in the design of their barbecues. He applies this experience to assist clients with safety-focused evaluation and analyses of product designs, hazard analysis, risk assessments, failure analysis, and product testing.

Mr. Wong was previously employed at Underwriters Laboratories certifying products to UL, CSA (Canadian Standards Association), and IEC (International Electrotechnical Commission) safety standards, including the UL/IEC 60335 family of standards. His responsibilities entailed conducting product construction reviews, developing standard test programs, evaluating product instruction manuals and labels, and working with clients to ensure compliance with the appropriate standards. He applies this experience in safety-focused analyses of consumer products, commercial products, and industrial equipment and machinery.

Mr. Wong's work has included:

- Consumer, Commercial, and Industrial Products
 - Household and commercial refrigerators and freezers
 - Vending machines
 - Pressure cookers
 - Home beer brewing systems
 - Gas barbecue grills
 - Air filters
 - Air conditioners and refrigerant components
 - Power tools and construction equipment
 - Refrigeration compressors, including high-voltage (15,000 V) systems
- Workplace Safety and Machinery
 - Machine guarding and lockout/tagout systems
 - Industrial and commercial workplace accident analysis

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Areas of Specialization

- Mechanical Engineering Systems
- Accident Analysis and Reconstruction
- Product Safety and Design
- Safety Standards and Codes
- Safety Engineering
- HVAC and Refrigeration Products
- Gas Products
- Risk Assessment/Hazard Analysis
- Experimental Testing and Failure Analysis

Education

M.S., Mechanical Engineering, University of Illinois at Chicago, 2005
B.S., Engineering Mechanics, University of Illinois at Urbana-Champaign, 2002

Licenses and Certifications

Licensed Professional Engineer (P.E.)

State of Illinois..... License No. 062063242

Certifications

ASGE Certified Gas Engineer (CGE)

Positions Held

Engineering Systems Inc., Aurora, IL

Senior Staff Consultant, 2021 - Present

Weber Inc., Palatine, IL

Test Engineer, Gas Train Systems, 2019 - 2021

Test Engineer, Research and Development Laboratory, 2016 - 2019

Underwriters Laboratories, Northbrook, IL

Senior Project Engineer, 2012 - 2016

Project Engineer, 2008 - 2012

Associate Project Engineer, 2006 - 2008

General Dynamics Land Systems, Sterling Heights, MI

Mechanical Engineer, 2005 - 2006

University of Illinois at Chicago, Chicago, IL

Graduate Research Assistant, 2003 - 2004

Professional Affiliations/Honors

Societies

American Society of Safety Professionals – Member
Society of Product Safety Professionals - Member
Human Factors and Ergonomics Society - Member
International Society for Occupational Ergonomics and Safety - Member
American Society of Mechanical Engineers - Member
American Society of Heating, Refrigeration and Air-Conditioning Engineers –
Associate Member
American Society of Gas Engineers – Member

Standards Committee

UL Technical Committee 82 – Electric Gardening Appliances - Member

Publications & Presentations

"Risk Assessment: When Have You Achieved Acceptable Risk?", Mathias, A.C., **Wong, W.**, Smolka, J.C., Mohorovic, J.P., Knox, E.H., IEEE International Symposium on Product Compliance Engineering (ISPCE), Chicago, IL, USA, April 30, 2024 – May 2, 2024

"Ergonomic Safety Analysis of Tilting a Concrete Grinding Machine", **Wong, W.**, Uchneat, S.F., Brickman, D.B., Knox, E.H., Eganhouse, J.T. The XXXIVrd Annual International Occupational Ergonomics and Safety, Virtual Conference, September 15-16, 2022

"Final Report XDX Refrigeration Valve Efficiency Testing," Worek, W.M., and **Wong, W.**, Illinois Department of Commerce and Economic Opportunity Grant No. 03-32107, 2004

Professional Development

OSHA 30 Hour Safety and Health (General Industry)
OSHA 30 Hour Safety and Health (Construction)
Forklift Operator Safety Training and Certification
Hazard Based Safety Engineering, Underwriters Laboratories
Safety of Household & Similar Electrical Appliances – General Requirements (IEC 60335-1), Underwriters Laboratories
Polymeric Materials – Use in Electrical Equipment Evaluations (UL 746C), Underwriters Laboratories
Residential Natural Gas Systems, CFITrainer.net
Residential Electrical Systems, CFITrainer.net
Investigating Natural Gas Systems, CFITrainer.net
Introduction to Appliances, CFITrainer.net
Fire Chemistry, CFITrainer.net
Fundamentals of Hydrogen, GTI Energy
Residential Wiring, William Rainey Harper College
Welding I, William Rainey Harper College
Introduction to Air Conditioning and Refrigeration, Oakton Community College
Digital Circuit Fundamentals, Oakton Community College
Mechanical and Electrical Systems for Buildings, Macomb Community College
Automotive Systems, Macomb Community College
Statistical Process Control and Design of Experiments, Sigma Science, Inc.
Continuous Improvement Fundamentals, Whirlpool Corp.
SOLIDWORKS Essentials: Parts and Assemblies Training, CATI
SOLIDWORKS Flow Simulation Training, CATI
SOLIDWORKS Simulation Training, CATI
eRail Safe Training
FARO Focus 3D Scanner