



WYLIE WONG, P.E.
SENIOR STAFF CONSULTANT

wwong@engsys.com

Mr. Wylie Wong is a Senior Staff Consultant and a member of the Biomechanics and Safety practice group. His principal areas of professional activity are mechanical engineering, product safety and design, and accident analysis and reconstruction. He has experience in safety evaluation of consumer, commercial, and industrial products. He uses that experience to assist clients with their product safety design, evaluation and development of user manuals and instructions, and workplace accidents.

Prior to joining ESi, Mr. Wong was employed at Weber Inc., first as a test engineer in their research and development laboratory, and then as a gas train design and project engineer, supporting existing products and new products in both roles. While at Weber, Inc., Mr. Wong used domestic and international safety standards to design gas barbecue grills for markets in North America, Europe, Australia/New Zealand, Latin America, and Asia. He has used statistical process control, design of experiments, and computational fluid dynamics in his work to support product designs. He applies this experience to safety-focused design evaluations, risk assessment, failure analysis, and testing of consumer and commercial products.

Mr. Wong was previously employed at Underwriters Laboratories in their HVAC and Refrigeration group certifying various products to UL, CSA, and international IEC safety compliance standards, including the UL/IEC 60335 family of standards. His responsibilities entailed conducting safety construction reviews, developing test programs, and evaluating product instruction manuals and labels. He was a technical auditor of client labs under UL's Client Test Data Program and the IEC's Supervised Manufacturer's Test Program. In that capacity, he was verifying that clients' test personnel could conduct tests according to the standards, if required test equipment was available and calibrated, and if the clients' laboratories could satisfy environmental conditions for the required tests. He applies this experience to safety-focused evaluations of consumer products, commercial products, and industrial equipment and machinery.

Mr. Wong's safety work has included:

- Household and commercial refrigerators and freezers,
- Home beer brewer
- Refrigerant compressors (including 15,000 V form-wound motor compressor insulation system),
- Air filters,
- Vending machines,
- Air-conditioners,
- Refrigerant containing components,
- Refrigerants,
- Gas barbecue grills (including portable gas barbecue grill)
- Workplace accidents

Areas of Specialization

Mechanical Engineering Systems

Accident Analysis and Reconstruction

Consumer Product Safety and Design

Safety Standards

Safety Engineering

HVAC

Risk Assessment

Experimental Testing and Failure Analysis

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Education

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

Licensed Professional Engineer (P.E.)

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

Professional Affiliations/Honors

American Society of 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

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

Publications & Presentations

“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, 2021

“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 General Industry Safety and Health

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 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

Sigma Science (Statistical Process Control and Design of Experiments), Sigma Science, Inc.

Continuous Improvement Fundamentals, Whirlpool Corp.

SOLIDWORKS Essentials: Parts and Assemblies Training, Computer Aided Technology (CATI)

SOLIDWORKS Flow Simulation Training, Computer Aided Technology (CATI)

SOLIDWORKS Simulation Training, Computer Aided Technology (CATI)

eRail Safe Training

FARO Focus 3D Scanner