STATEMENT OF QUALIFICATIONS

BATTERY TESTING FACILITIES IN A LABORATORY ENVIRONMENT

Specialty Consulting + Engineering Services



JENSEN HUGHES

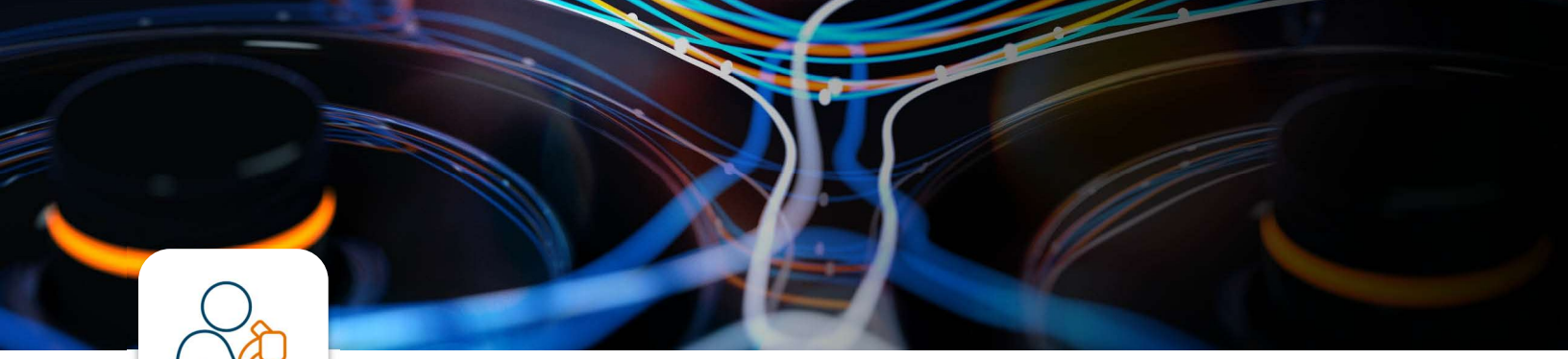
jensenhughes.com

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved. T0123

Table of Contents

LITHIUM-ION BATTERY TESTING FACILITIES IN A LABORATORY ENVIRONMENT 3
Understanding Lithium-Ion Batteries 3
Service Offerings 4
Battery Test Stand + Laboratory Protection 4
Hazard Mitigation + Risk Assessment 4
Consequence Modeling 4
Explosion Protection 4
Fire Protection + Life Safety 4
Performance-Based Design 4
Fire Protection Systems Design 4
THOUGHT LEADERSHIP + EDUCATION 5
Educational Training Courses/Discussions 5
Recent Jensen Hughes Publications 6
Risk Technology 6
PROJECT EXPERIENCE 7
Case Studies 8
Additional Experience 10
SUBJECT-MATTER EXPERTS 11
FIRM OVERVIEW 15

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123



Lithium-Ion Battery Testing Facilities in a Laboratory Environment

We help create safer lab testing environments by evaluating potential hazards and associated risks and facilitating certification for testing various battery technologies, including lithium-ion cells, modules, and packs/racks. We assess your entire facility and surrounding areas to help you minimize risk by ensuring building and life safety criteria are met.

UNDERSTANDING LITHIUM-ION BATTERIES

Understanding and mitigating the potential hazard (e.g., off-gassing, fire, and thermal runaway) associated with lithium-ion batteries are essential for the safety of personnel, assets, and the success of projects. Implementing rigorous safety protocols and employing advanced fire protection measures can help maximize the benefits of lithium-ion technology while minimizing risks.

At Jensen Hughes, we specialize in providing expert fire protection and life safety services tailored to safeguard lithium-ion battery projects. Having worked with government, industrial and commercial clients to understand lithium-ion battery fire safety for well over 30 years and working with third-party stakeholders such as authorities having jurisdiction (AHJ), insurers, and manufacturers, our team has earned an excellent worldwide reputation.

Jensen Hughes has conducted approximately 15 years of research for the U.S. Navy, assessing the fire hazards associated with the spectrum of lithium (non-rechargeable) as well as lithium-ion batteries for use onboard Navy ships and submarines. We have been a leader in the energy storage industry since the early 1990s and have globally supported projects ranging from small-scale electric vehicles (EVs) to the largest energy storage systems (ESS) and battery manufacturing plants in the world.

Our Strength Lies in Our Employees + Company Talent

- 1,900+ engineers, designers and consultants that specialize in fire protection, electrical, mechanical and structural engineering.
- Extensive experience designing and evaluating fire alarm, sprinkler and special hazards systems.
- Certified NICET IV staff, 200+ licensed fire protection engineers and 300+ fire safety consultants.
- Committee members on NFPA 72, *National Fire Alarm and Signaling Code*, NFPA 13, *Standard for the Installation of Sprinkler Systems* and NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*.
- Technical committee members on over 200 NFPA Codes, Standards, and Recommended practices.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

SERVICE OFFERINGS

Battery Test Stand + Laboratory Protection

Lithium-ion battery systems used in electrified powertrains must be tested to ensure they meet performance requirements. This includes charge and discharge operations and exposure to extreme conditions. These plug-and-play test stands are often in dedicated laboratory rooms or inside containers. Considering the hazards of lithium-ion batteries, this brings unique challenges for protecting such test stands. Our experts identify these challenges and design appropriate prevention and mitigation systems.

Hazard Mitigation + Risk Assessment

The safety controls and hazard mitigation approach need to consider the inherent hazards associated with them. To help determine the level of risk, the AHJ typically requests a hazard mitigation analysis (HMA). This can be in different forms, such as bowtie analysis, failure mode and effects analysis (FMEA), or fault tree analysis. A fire risk assessment (FRA) is typically required as well.

Consequence Modeling

Understanding the potential outcomes of battery failures can help design appropriate safety measures and inform the layout and construction of laboratory facilities. Incorporating this understanding into the design can create more robust and effective safety environments for lithium-ion battery technology research and development in laboratories.

Explosion Protection

Lithium-ion batteries can release large amounts of flammable gas during an abnormal condition. Our experts analyze thermal runaway conditions, evaluate gas compositions and concentrations, use computational fluid dynamics (CFD) modeling to evaluate gas releases, and design adequate explosion control measures such as deflagration venting for enclosures (i.e., NFPA 68) or explosion prevention systems (e.g., mechanical exhaust systems following the requirements of NFPA 69).

Fire Protection + Life Safety

Anywhere in the supply chain that lithium-ion technology is employed, our experts can review and mitigate risk. As more organizations adopt new technologies, the introduced hazards must be addressed. We have over three decades of experience understanding and mitigating lithium-ion battery failures and fire hazards. We support proactive designs to help clients by identifying and mitigating fire and thermal hazards, cell assembly inefficiencies, and operational and emergency response deficiencies before they become catastrophic.

Performance-Based Design

Building and fire codes require fire safety features based on a one-size-fits-all approach. While traditional code compliance may be acceptable for many buildings, the codes limit design flexibility and can hinder the architectural design intent for many complex and state-of-the-art projects. Our engineers use advanced fire, smoke, toxic battery gas, and egress modeling techniques for alternative or performance-based designs.

Fire Protection Systems Design

Beyond the standard approach to fire protection in buildings, Jensen Hughes works to determine the most appropriate way to quickly detect and suppress a fire, should a failure event occur. Considering costs, we assess the hazards present and either modify existing fire protection systems (e.g., automatic sprinkler systems) or design new systems after evaluating potential fire scenarios, conducting flammability analysis, and reviewing local regulations. We subscribe to a philosophy of cohesive design from concept to execution, which provides our clients with feasible, practical, and goal-oriented fire protection systems design.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Thought Leadership + Education

LEADERS IN THE EVER-EVOLVING ELECTRONIC BATTERY INDUSTRY

Jensen Hughes has continued to be a leader for the growing Energy Storage System (ESS), Electronic Vehicle, and Lithium-Ion Battery industry for many years. In addition to our widely publicized educational presentations used to provide thought leadership to the industry, we have curated information for specialized training in small group settings used to educate integrators, owner/operators, and authorities having jurisdiction on their specific needs and areas of interest.

Educational Training Courses/Discussions

Below are some of our most recent educational training courses and discussions regarding this growing industry.

- The Battery Show North America 2024, Process and Safety Solutions for Lithium-Ion Battery Testing Facilities in a Laboratory Environment, Jens Conzen, Mark Suski, Jihan El Ouaragli
- National Fire Protection Association (NFPA) Annual Conference – June 17, 2024, Battery Energy Storage System Workshop, Jens Conzen, Sunil Lakshmipathy, Jihan El Ouaragli, Francisco Joglar
- PowerGen 2024, Energy Storage System Safety Best Practices: Ask the experts, panel discussion, Jens Conzen, Jim Biggins, Erik Archibald, Nick Warner, Robert Steele, Paul Hayes
- European Union ESS Safety Conference 2023, Explosion Control Challenges at Lithium-Ion Battery Energy Storage Systems, Jens Conzen
- The Battery Show North America 2023, Performance-Based Solutions for Lithium-Ion Battery Hazards in the Manufacturing Environment, Jens Conzen & Mark Suski
- PowerGen 2023, Lithium-Ion Energy Storage Systems Best Practices: Ask the experts, panel discussion, Jens Conzen, Noah Ryder, Nick Warner, Erik Archibald
- U.S. Department of Energy (DoE) - Energy Storage Safety & Reliability Forum 2022, Prevention System for Li-Ion Based Battery Energy Storage System, Jens Conzen
- The Battery Show North America 2022, Lithium-Ion Battery Hazards in EV and Manufacturing Environments, Jens Conzen & Mark Suski
- Society of Fire Protection Engineers (SFPE) Annual Conference – October 19, 2021, Trends in Energy Storage System Panel Discussion; Presenters – Adam Barowy, UL; Christina Francis, Tesla; Moriel Kaplan, Jensen Hughes
- Canadian Fire Safety Association (CFSA) Annual Education Forum – September 22, 2021
  - Lithium-Ion Batteries – Fundamentals and Hazards; Presenter – Amir Baraughi, P.Eng.
  - Introduction to Energy Storage Systems (ESS); Presenter – Daniel Gottuk, PhD, PE
  - Energy Storage Systems (ESS) a Case Study; Presenter – Jens Conzen
  - Handling, Storage & Fire Protection of Lithium-Ion Batteries; Presenter – Jason Sutula, PhD, PE
- Society of Fire Protection Engineers (SFPE) Member Webinar Series – September 27, 2021, Protecting the Future of Lithium-Ion Batteries; Presenters – Moriel Kaplan, PE and Daniel Gottuk, PhD, PE

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Recent Jensen Hughes Publications

We pride ourselves on being on the cutting edge of the industry. We regularly present and publish about our work on lithium-ion battery hazard mitigation:

- Kapahi, A., et. al., Experimental methodology and validation data for vented deflagrations in BESS enclosures, Process Safety and Environmental Protection Journal, Volume 210, 1 April 2026, https://doi.org/10.1016/j.psep.2026.108646
- El Ouaragli, J., et. al., White Paper – Advancing Li-Ion Bess Safety: Comprehensive Testing and Meta-Analysis For Optimized Hazard Mitigation, Limitations of UL9540A for Li-Ion BESS Hazard Analysis, March 2024, https://s3.us-east-1.amazonaws.com/jensenhughes/uploads/Advancing-Li-ion-BESS-Safety.pdf
- Conzen, J., et al., Lithium-Ion Battery Energy Storage Systems (BESS) Hazards, Journal of Loss Prevention in the Process Industries Volume 81, February 2023.
- Kapahi, A., et al., A CFD based methodology to design an explosion prevention system for Li-ion based battery energy storage system, Journal of Loss Prevention in the Process Industries Volume 83, July 2023.
- Lakshmipathy, S., et al., Modelling Methodology for Deflagration Vent Design of Battery Energy Storage Systems, Conference Proceedings 14th International Symposium on Hazards, Prevention, and Mitigation of Industrial Explosions, July 2022.

Risk Technology

For more than three decades, our engineers have pioneered the development of risk technology that has been in use by many industries worldwide. The scope of our contribution covers all aspects of risk technology, from systems to severe accidents and radiological release, covering all modes under all internal and external hazard conditions. Our engineers have also contributed to the development of guidance for, and first-of-a-kind application of the risk technology in various other industries.

Our contribution to technology benefited from our extensive experience in plant design and operation, support in the development of regulatory frameworks around the world, and other considerations such as our experience in risk and asset management (i.e., loss prevention).



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Project Experience



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Project Experience

Jensen Hughes has been supporting the industry on numerous BESS projects ranging from the kilo-watt-hour to giga-watt-hour scale. We have been fortunate to have supported the largest investments in the industry. This includes supporting leading power utilities, integrators, system designers, and battery original equipment manufacturers. Jensen Hughes is engaged in research and development as well as technical committee work. Furthermore, Jensen Hughes has been supporting the lithium-ion battery manufacturing and electric vehicle manufacturing industries, which face similar challenges.

CASE STUDIES

UL Solutions, North America Advanced Battery Laboratory (2023)

Auburn Hills, MI

UL Solutions officially began constructing its North America Advanced Battery Laboratory in Auburn Hills, Michigan.

The facility will help enable electric vehicle (EV) and industrial battery equipment manufacturers (OEMs) and their suppliers to achieve shorter development cycles, faster time-to-market, and greater competitiveness in the global marketplace. Within this facility, rooms and areas are used to facilitate certification and abuse testing of battery technologies, including, but not limited to, lithium-ion cells, modules, and packs/racks. Additionally, the testing equipment and testing rooms must be able to withstand overpressures and high temperatures due to the nature of the testing.

Jensen Hughes' scope of work included a fire and explosion hazard assessment, risk assessment, deflagration vent analysis, and testing equipment hazard review. The analysis covered the entire proposed battery testing facility, focusing on local fire codes and best practices for explosion pressure relief and fire protection. Detailed Computational Fluid Dynamics (CFD) analyses were performed to evaluate accurate loading scenarios on the building structure for tests in which deflagrations from the ignition of flammable battery gas due to thermal runaway could occur.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

UL Solutions, Metroplan High-Lev Project (2022)

Poland

Jensen Hughes provided Battery Hazard and Risk Assessment services for the UL-Metroplan High Lev Project in Poland.

Within this facility, various rooms and areas are used to facilitate certification and abuse testing of numerous battery technologies, including lithium-ion cells, modules, and packs/racks. Additionally, the space surrounding the testing facility was assessed for shipping, receiving, and storing battery technologies, including, but not limited to, lithium-ion cells, modules, and packs.

Jensen Hughes evaluated the potential battery hazards and risks based on the expected loading, storage, and testing of battery technologies, including lead-acid, nickel-cadmium, nickel-metal hydride, several lithium-ion chemistries, and other potential test cells, modules, and packs in the facility's test chambers and testing rooms. The assessment also included reviewing local building codes and AHJ safety criteria, evaluating potential hazards and associated risks, and developing fire and explosion protection recommendations at the test chamber and test room levels.

CSA Group (2023)

Independence, OH

CSA Group, a global leader in testing, inspection, certification, and standards development, has officially opened a new distributed energy resource lab in Independence, Ohio.

The new lab addresses the growing demand for testing and certification of energy storage devices, charging equipment, microgrid components, and power conversion systems. CSA Group evaluates or tests cells, packs, appliances and tools, e-mobility devices, and energy storage systems at this state-of-the-art facility. Primary and secondary (rechargeable) batteries with chemistries including alkaline, lithium-ion, nickel metal hydride (NiMH), lead acid, and nickel-cadmium (NiCd), as well as newer technologies such as zinc-based and flow batteries, are tested at the facility.

Jensen Hughes' scope of work in support of the development of this facility addressed two phases of the project:

+ **Laboratory Light**, which allowed for small-scale production testing in the near future.
+ **Full Production Laboratory**, which allowed for full-scale production testing in the long term.

The core of the scope of work from Jensen Hughes included a Battery Hazard and Risk Assessment Report with an evaluation of the expected battery cells, modules, packs/racks, test chamber equipment, testing rooms, and testing abuse labs. Furthermore, an analysis of the fire and explosion hazards, determination of potential fire and explosion scenarios, determination of appropriate deflagration vent sizing, evaluation of fire suppression, fire detection, fire barriers and separations, mechanical ventilation, and emergency response as it relates to hazard prevention and/or mitigation. Lastly, the scope of work included an assessment of local code requirements and gap analysis with best practices along with recommendations.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Naval Surface Warfare Center (NSWC), High Energy Test + Abuse Facility (2023)

Crane, IN

Naval Surface Warfare Center (NSWC) Crane Division, Special Warfare & Expeditionary System's Power and Energy Systems Division (JXM) is a premier Navy Research, Development, Test and Evaluation (RDT&E) national lab conducting abusive testing of military-grade batteries.

JXM tests all types/sizes of batteries powering submarines, ships, Abrams, Stryker, JLTV, Orca, and numerous hybrids across the DoD spectrum. The new P-351 battery test facility aligns with the DoD's long-term strategic battery and energy storage strategy. The P-351 building is intended to provide a research facility that allows the ability to test larger batteries than is currently capable at any other location. This testing involves subjecting articles to credible worst-case abusive failure modes.

Jensen Hughes was contracted as a Subject-Matter Expert (SME) to analyze the proposed batteries to be tested. The intent of Jensen Hughes' analysis was to validate previous planning efforts to determine the area, volume, and building materials of the proposed facility. The primary intent of this analysis was to examine the maximum amount of pressure each test cell would need to withstand. Jensen Hughes followed all existing federal, state, and local requirements, codes, criteria, and instructions, along with their own experience and expertise, to validate this methodology by which the square footage requirements and preliminary floor planning efforts were derived. Risks that were accounted for included, but were not limited to, those associated with pressure build-up, deflagration, fire and explosion hazards, hazardous material emissions, and firefighting operations.

ADDITIONAL EXPERIENCE

Ford Motor Company, Project Hickory, Marshall, MI

Code Consulting Services, Risk Hazard Analysis, Lithium-Ion Battery Cell Testing

General Motors, Warren Technical Center Battery Testing Areas, Warren, MI

Code Consulting Services

Stanley Black & Decker, Proposed Lithium-Ion Battery Laboratory Facility, Towson, MD

Fire Protection Hazard Assessment Feasibility Study

Electrical Power Research Institute (EPRI)

Member of the Industry Advisory Committee + Various Research Projects in the Areas of BESS Fire Prevention and Mitigation, as well as Hazard Mitigation Analysis

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Subject-Matter Experts



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Subject-Matter Experts

Our team can provide deep expertise in Lithium-Ion Battery Testing and Risk Analysis, while also having the technological and business expertise to adapt to all the client's needs and priorities. This is what makes the Jensen Hughes team unique and qualified for this project.

Bios for all key personnel are provided below. Full CVs/resumes can be provided upon request.



Experience
20 years

Principal Technical Committee Member of NFPA 855

Industry Advisory Committee Member for EPRI on BESS Fire Prevention & Mitigation

JENS CONZEN, DIPL.-ING, EUR ING, MS, MBA

Vice President

Jens is VP of business development with a focus on Fire & Building Safety and Industrial & Process Safety. He has hands-on experience across various disciplines, including engineering design, international and national engineering standards, simulation, and testing. He strives to work on interdisciplinary teams on projects that require a standard or customized solution approach.

For customized solutions, he leverages scientific principles and validates them with experimental data (i.e., data-driven solutions). He serves various industries, including power generation (renewable, nuclear, and conventional), energy storage, manufacturing, pharmaceuticals, and chemical production. Areas of emphasis include reactive chemical hazards (i.e., thermal runaway), overpressure safety, operational issues with power-generating and power-storage equipment, and chemical process plants. Jens supports research related to lithium-ion battery safety and fire and explosion safety for energy storage systems (ESS).

Furthermore, he is extensively involved with the development of chemical reactor safety systems. Experienced with pressure capacity and structural dynamic analysis of industrial systems, he has supported many of the leading suppliers to help them deliver more robust solutions.



Experience
40+ years

GERARD "JERRY" BACK, CFEI, CVFI, CFPS

Director

Jerry is one of Jensen Hughes' top subject-matter experts in the field of fire investigation and prevention. Over his four-decade career, he has conducted investigations for federal agencies (DOT/NHTSA, DOE), the military (USN, USCG, and US Army), and numerous private clients, providing fire hazard analyses and developing fire suppression systems.

Since 2007, he has specialized in assessing lithium battery hazards and developing mitigation techniques. He is a member of seven professional associations pertaining to engineering and fire protection and serves on more than 10 committees focused on fire safety and rescue.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123



Experience
20 years

MICHAEL TOWNSEND, CSP, SMS, CFPS

Market Director, Midwest Region + Industrial and Energy Storage

Michael has diverse experience in fire protection engineering and project management. His background spans a wide range of projects, serving as both a technical leader and project manager. These projects include ensuring compliance with NFPA codes and standards, conducting fire and safety audits, developing alternative safety program compliance strategies, updating fire protection systems, performing engineering analyses, and conducting fire hazard assessments. He is well-versed in navigating regulatory requirements, collaborating with stakeholders to develop practical, effective fire protection solutions tailored to each project's unique needs, and fostering community engagement through clear communication and education on fire safety best practices.

Michael is recognized for his ability to translate complex technical requirements into actionable project plans, guiding multidisciplinary teams from project conception through successful completion. He has led initiatives to integrate cutting-edge fire protection technologies, streamline safety protocols, and ensure ongoing regulatory compliance. His commitment to continuous improvement and safety excellence has resulted in enhanced fire protection strategies and safer environments for clients and communities alike.



Experience
25 years

FRANCISCO JOGLAR PE, PhD

Director, Fire Risk Assessment

Dr. Joglar is experienced in the fields of fire hazards analysis, fire risk assessment, fire modeling and uncertainty analysis. Since 2001, he has been researching and consulting in the areas of fire protection engineering, fire hazards and fire risk assessment. In the research area, he has been developing fire protection and fire risk technology. In the consulting area, he has participated in numerous fire modeling and fire risk projects in various capacities, including fire risk analyst, technical lead, project manager, and technical oversight.

Currently, he is the chair of both the ASME/ANS Fire PRA Standard (Part 4) for nuclear power applications and the working group updating the SFPE Fire Risk Assessment methodology. In addition, for the last ten years, he has been teaching master's degree-level courses in fire risk and hazard analysis at the University of Maryland and Cal Poly.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123



Experience:
3 years

JIHAN EL OUARAGLI, PhD

Associate

Dr. Jihan specializes in battery safety and fire protection, including battery storage and testing, battery energy storage systems (BESS), and e-mobility and electric vehicles (EVs). With a Ph.D. in Energy Storage from Worcester Polytechnic Institute (WPI), she brings over five years of expertise in designing innovative battery solutions and ensuring the reliable and safe operation of critical battery technologies. She focuses on enhancing fire and life safety measures for battery installations via hazard mitigation assessments and comprehensive mitigation strategies.

She is actively involved in safety standards, battery research and the development of testing protocols for various battery projects. Dr. Jihan's commitment to safeguarding lives and property through advanced fire protection solutions positions her as a leading expert in the field.



Experience:
23 years

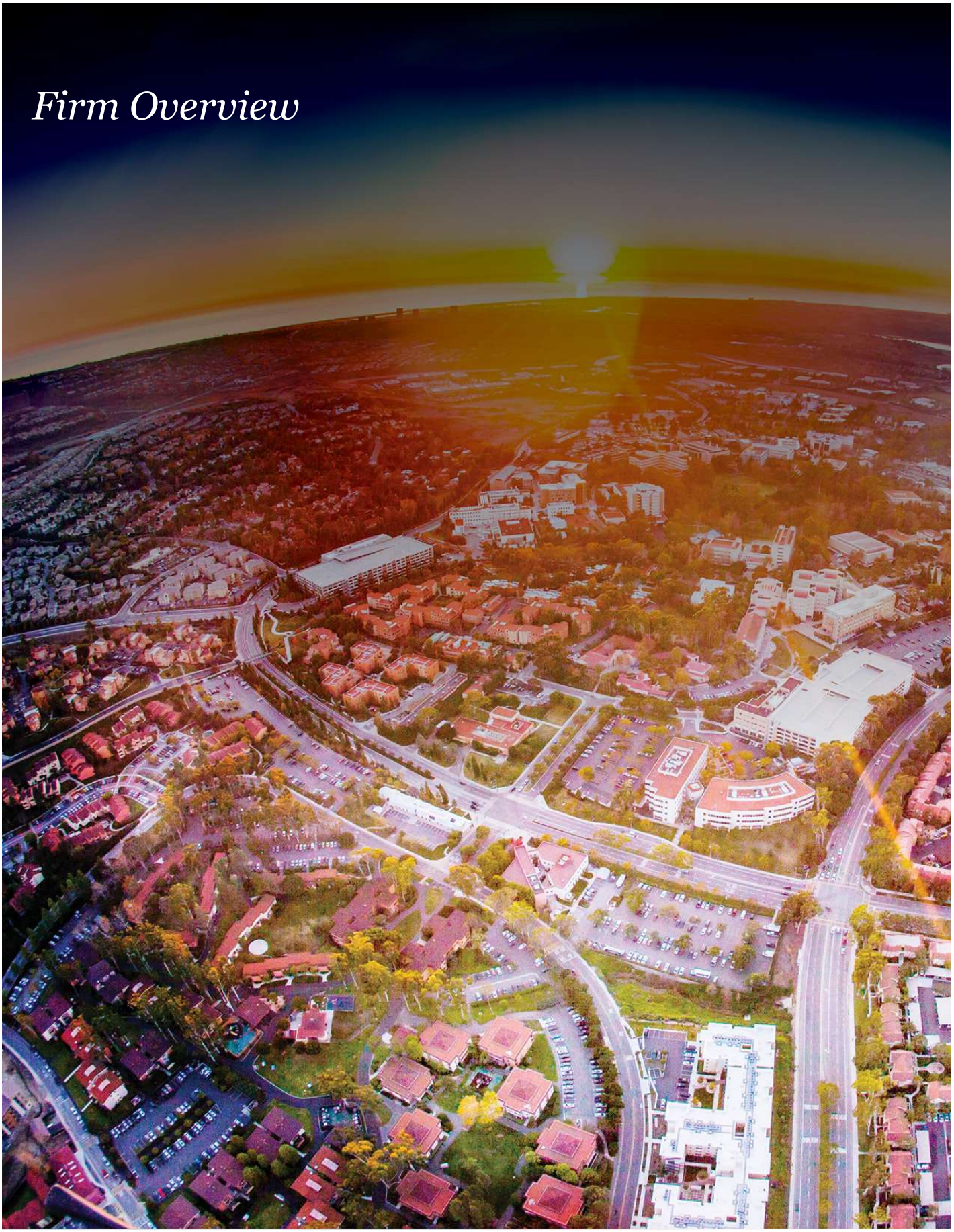
ANIL KAPAHI, PhD

Team Leader, Research, Development, Testing + Evaluation

Dr. Anil Kapahi directs the Research, Development, Testing, and Evaluation (RDT&E) department at Jensen Hughes. He has over 20 years of experience in engineering consulting and academia. He has led numerous multidisciplinary teams in basic and applied research efforts to solve complex problems involving hazards related to fire, explosions, and toxicity affecting people and property. He is also a technical member of the NFPA 855 committee and a principal member of the NFPA 68/69 Technical Committee on Explosion Prevention and Protection Systems.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Firm Overview



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123



SINCE 1939, WE HAVE DEDICATED OURSELVES TO FIRE PROTECTION ENGINEERING, INITIALLY IN THE UNITED STATES AND NOW WORLDWIDE.

Today, our expertise, commitment and passion extend across additional domains — including accessibility consulting, risk and hazard analysis, process safety, forensic investigations, security risk and emergency management as well as digital innovation across many of our services.

We help our clients face the most critical issues in our industry and world, including:

Critical Infrastructure Protection

As a strategic partner to global public and private enterprises with fixed asset portfolios, we help clients anticipate risks and take action before harmful incidents occur. We provide services for everything from interstate pipelines and mission-critical data centers to nuclear power facilities and government landmarks.

Environment, Communities + Standards

As an industry leader, we build a better world by providing innovative solutions for the most complex issues facing society. We assist wildfire risk, consult on energy storage system solutions, safely advance carbon-free infrastructure like nuclear power, and commercial workplaces, and strive to set an example in our industry for diversity, equity and inclusion.

Protecting People Before, During + After Crises

As experts, we protect people wherever they work, live or play. We uncover root causes, investigate structural defects and product failures, intervene when an employee poses a risk of violence, and champion new ways for police departments to answer the needs of communities.

Large-Scale Design + Construction

As a preferred partner to the most respected architectural and engineering firms in the world, we help bring to life the safest, most secure and most resilient infrastructure — like the tallest buildings, strongest dams and longest tunnels as well as new cities in emerging markets.

Industry Leadership

We have served on more than 450 committees for international standards-setting organizations and have been instrumental in the development and revision of safety codes. Through our client service, recruitment and training, we help drive the adoption of codes and standards worldwide.

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Industry Leadership + Standards Development

Every year, we invest deeply in research and development at the forefront of safety, security and resilience issues. From in-house lab modeling and dust combustibility testing to automation machine learning and digital innovation, we are driven by our commitment to discovery and exploration to make the world a better place for all. We also move our industry forward by actively participating in professional organizations and over 200 committees dedicated to the development and revision of safety codes and standards. We are founding editors of the Society of Fire Protection Engineers (SFPE) Handbook on Fire Protection Engineering and are contributors to this day. Our team supports industry policy and research through work with the Nuclear Energy Institute (NEI) and Electrical Power Research Institute (EPRI). We're also a training partner of the Automatic Fire Alarm Associates (AFAA) and instructors for the National Fire Protection Association (NFPA®) program.

ASSOCIATIONS + MEMBERSHIPS

- National Fire Protection Association (NFPA)
- Society of Fire Protection Engineers (SFPE)
- International Code Council (ICC)
- Institute of Electrical and Electronics Engineers (IEEE)
- Underwriters Laboratory (UL)
- Fire Protection Research Foundation (FPRF)
- American Society for Testing and Materials (ASTM)
- Automatic Fire Alarm Association (AFAA)
- American Society of Mechanical Engineers (ASME)
- American Nuclear Society (ANS)
- American Institute of Steel Construction (AISC)
- American Iron and Steel Institute (AISI)
- American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
- ASIS International (ASIS)
- Council on Tall Buildings and Urban Habitat (CTBUH)
- National Association of Fire Investigators (NAFI)
- Joint Army-Navy-NASA-Air
- Force Safety and Environmental Protection (JANNAF)
- World Organization of Building Officials (WOBO)
- Canadian Standards Association (CSA)
- Canadian Commission on Building and Fire Codes (CCDFC
- Accessibility Standards Canada (ASC)
- Institution of Mechanical Engineers (IMechE)
- Chartered Institution of Building Services Engineers (CIBSE)
- Technical Committee of Building Fire Safety, China association for Engineering Construction Standardization (CECS)
- Hong Kong Institution of Engineers (HKIE)
- Macau Institute of Engineers
- Korea Fire Facility Association (KFFA)
- Korea Engineering & Consulting Association (KENCA)
- Korean Institute of Fire Science and Engineering (KIFSE)
- Finnish Association of Civil Engineers RIL
- Institution of Fire Engineers (IFE)
- British Standards Institution (BSI
- Smoke Control Association (SCA)
- Italian National Unification (UNI)
- European Fire Sprinkler Network (ESFN)
- International Water Mist Association (IWMA)
- Various Fire Inspector and Fire Chiefs Associations Nationwide
- Society of Women Engineers (SWE)
- Women in Nuclear (WIN)

Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

An 80-Year History of Innovation

A STORY OF GROWTH, INNOVATION + SUCCESS

Jensen Hughes was launched in 2014 through the historic merger of Hughes Associates and Rolf Jensen & Associates (RJA), two of the most experienced and respected fire protection engineering companies at the time.

Since then, we have expanded through strategic acquisitions, growing our global presence and service offerings.

Through the integration of more than 30 engineering and consulting firms, our global reach has expanded significantly, establishing a market presence 7x larger than that of our closest competitor.

Our legacy firms trace their origins back to 1939, a rich history that spans over 80 years of knowledge and innovation worldwide.

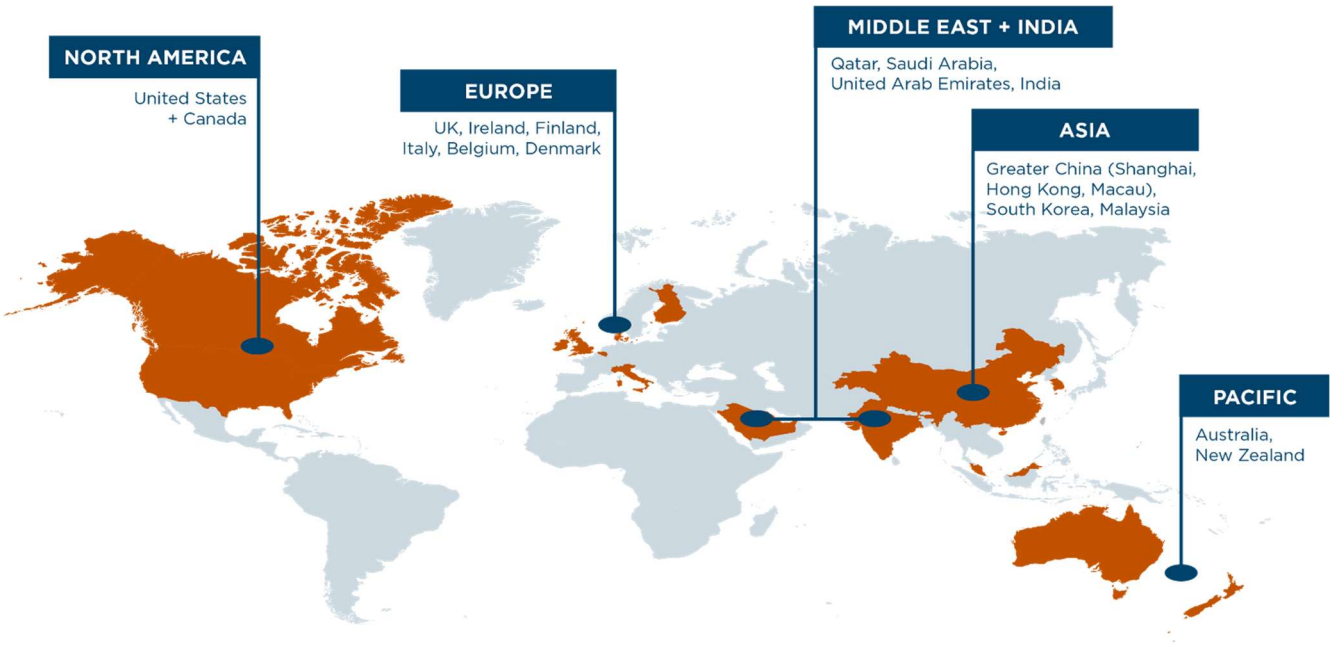


Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123

Global Reach, Local Presence

MEETING THE NEEDS OF OUR CLIENTS + THE COMMUNITIES WE SERVE

With offices worldwide and employees on the ground in North America, Europe, the United Kingdom, Asia, and the Pacific, we work as a global team to meet the needs of our clients wherever they are. You will not only benefit from our worldwide reach but also gain critical in-country knowledge and local service.



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123



Copyright ©2026 Jensen Hughes, Inc.
All Rights Reserved.T0123