



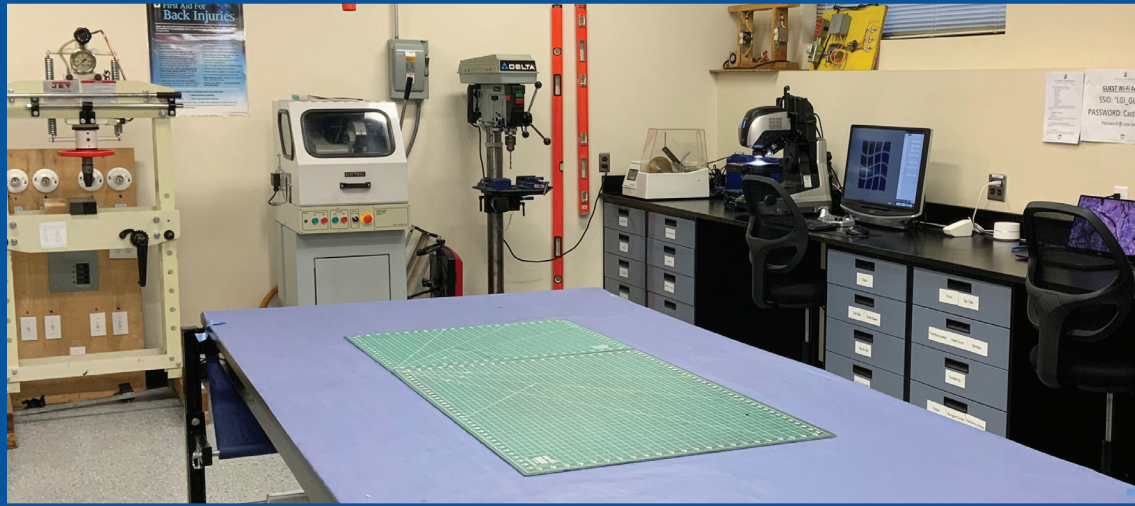
LGI FORENSIC ENGINEERING, P.C.

Engineers, Architects, Consultants and Investigators



WHEN YOU NEED TO KNOW WHY, YOU NEED LGI

FORENSIC INVESTIGATIVE APPROACH



LGI Forensic Engineering, P.C. provides clients with a thorough and accurate investigation, by combining extensive hands-on technical experience with strong scientific and engineering analysis. Clients can be confident their assignments will be given the attention and professional expertise they deserve – from field inspection and testing to deposition and court testimony.

LGI'S EXPERTISE IN FORENSIC ANALYSIS EXTENDS TO THE FOLLOWING DISCIPLINES:

- › Construction
- › Architecture
- › Civil/Structural
- › Mechanical
- › Product Liability
- › Premises Liability
- › Materials Science
- › Electrical
- › Fire Origin & Cause/Explosion/Fire Protection

LGI'S LABORATORY IS ANAB ISO/IEC 17025:2017 ACCREDITED FOR FORENSIC TESTING AND IS A FULL-SERVICE TESTING FACILITY THAT PROVIDES THE FOLLOWING SERVICES:

NON-DESTRUCTIVE AND DESTRUCTIVE EXAMINATIONS:

- › Forensic Photography
- › Virtual Lab Examinations
- › Function Testing
- › Custom-Built Testing Apparatus

MICROSCOPY:

- › 4K Digital
- › SEM
- › Stereo

MATERIAL ANALYSIS:

- › FTIR – Organic & Inorganic
- › EDS – Elemental
- › DSC – Polymers
- › Mechanical Testing

METALLOGRAPHY & FRACTOGRAPHY:

- › Corrosion
- › Grain Boundry Defects
- › Hardness Testing
- › Micro-Structural Defects
- › Alloy & Phase Detection



LGI FORENSIC LABORATORIES, INC.

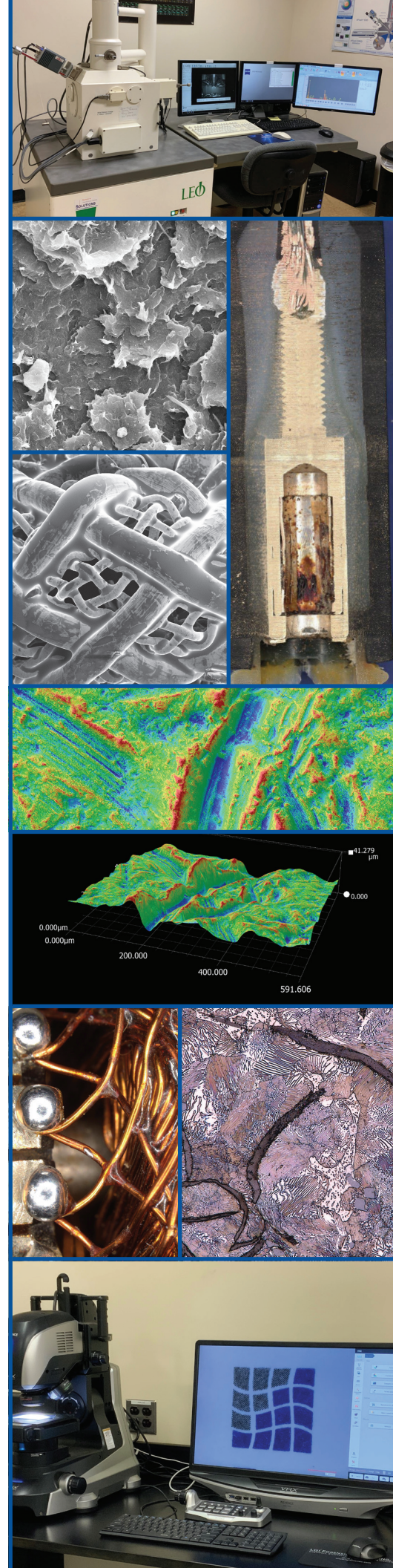
ACCREDITED BY ANAB ISO/IEC 17025 FOR FORENSIC TESTING

LGI has an ANAB ISO/IEC 17025:2017 accredited laboratory supplied with scientific instrumentation to assist our clients with joint inspections, destructive and non-destructive testing, scientific analysis of products and materials science. Our laboratory technicians and engineers analyze failures, perform critical testing, and conduct research to help uncover the cause and origin of failures. LGI understands the formulation of concise and accurate opinions based on factual evidence is critical to the resolution of insurance claims and court cases. LGI addressed the needs of experts, counsel, and claim handlers with reservations about attending live laboratory exams by designing and installing a virtual solution for attendees. LGI installed tilt-pan-zoom cameras, stationary cameras, two-way audio speakers and microphones, and shared instrumentation screens in the laboratory. This allows clients to witness, interact, and participate in examinations via the user-friendly ZOOM meeting software. Our virtual capabilities are the next best thing to being present in our lab, while remaining safe and healthy at your home or office.

THE LABORATORY IS OUTFITTED WITH THE FOLLOWING SCIENTIFIC INSTRUMENTS:

- › **Ziess Scanning Electron Microscope coupled with an iXRF Systems energy dispersive X-ray spectrometer (SEM/EDS):** images the surface of fractures and other critical areas of interest on evidence up to several thousand times magnification and can identify elemental composition of materials
- › **Thermo Scientific Fourier Transform Infrared Spectrometer (FTIR):** provides positive material identification for both organic and inorganic materials
- › **Keyence VHX 7000 Series 3-D 4K Ultra-High Accuracy Microscope:** Delivers high definition imaging that rivals SEM while providing color, dimensional analysis, high depth of field, and 3-D profilometry.
- › **Nikon Eclipse Inverted & Stereo Microscope:** provides clear and defined metallographic imaging up to 1000X on prepared samples, and low magnification imaging on large samples.
- › **Buehler Micro Hardness Tester:** provides hardness measurements of metals on a microscopic scale
- › **Clark Macro Hardness Tester:** provides hardness measurements of metals on a macroscopic scale
- › **TA Instruments Differential Scanning Calorimeter:** provides valuable information on polymers and plastics including a material's glass transition and melting temperature, thermal history, and oxidative induction time.
- › **Mobile X-Ray Radiography:** allows non-destructive imaging of internal components

At LGI, the Science Tells the Story



OUR SERVICES



CIVIL/STRUCTURAL – PROPERTY:

- › Civil Engineering & Analysis
- › Structural Engineering & Analysis
- › Water/Wind/Flood/Storm Damage
- › Lightning Damage
- › Earthquake Damage
- › Foundation Systems & Failures
- › Roofing Systems & Failures
- › Building Codes & Safety Codes
- › Bridges & Infrastructure
- › Building Inspections
- › Standard of Care – E&O Claims
- › Safety Codes
- › Waterproofing Evaluations

ELECTRICAL ENGINEERING:

- › Electrical Engineering & Analysis
- › Electrical Accidents & Injuries
- › Electrical Equipment/Control Systems
- › Electrical Fires
- › Lightning Damage to Components
- › Alarm/Security Systems
- › Products Evaluations
- › Appliances & Electronics
- › Electrical & Safety Codes
- › Utilities Evaluations/Underground Wiring

CONSTRUCTION SERVICES:

- › Construction Defect
- › Construction Accidents
- › Construction Injuries/Labor Law
- › Construction Disputes
- › Delay & Scheduling
- › Architectural Consulting
- › Vibration Claims & Monitoring
- › Contractor Performance/Surety
- › Standard of Care – E&O Claims
- › Building Codes & Safety Codes
- › Building Envelope Evaluations
- › Facade Analysis
- › Construction Sequencing
- › Building Commissioning
- › Construction Product Failures
- › Heavy Equipment – Accidents/Failures

LGI Offers Comprehensive Solutions to Complex Problems





OUR SERVICES

FIRE & EXPLOSION SERVICES:

- › Fire Origin & Cause
- › Fire Scene Analysis
- › Explosion Analysis
- › Electrical Fire Analysis
- › Mechanical/Product Analysis
- › Fire Protection Engineering
- › Fire Suppression/Sprinkler Systems
- › Vehicle & Vessel Fire Analysis

LITIGATION SERVICES:

- › Case Reviews
- › Professional Expert Reports
- › Affidavits
- › Expert Witness Testimony
- › Demonstrative Evidence
- › Discovery Requests
- › Scientific Research
- › Review Opposing Expert's Testimony
- › Simulations/Mock-Ups

MECHANICAL ENGINEERING:

- › Mechanical Engineering & Analysis
- › Mechanical Accidents & Injuries
- › Mechanical Failures/Defects
- › Equipment/Machinery/Products
- › Plumbing Systems - Piping/Sprinklers
- › HVAC Systems Evaluations
- › Appliance Evaluations
- › Boilers & Burners Evaluations
- › Mechanical Control System Failures
- › Gas Systems & Steam Systems
- › Playground Safety/Equipment Failures
- › Slips/Trips/Falls – Premises Liability
- › Utilities-Power Generation/ Distribution

ENVIRONMENTAL SERVICES:

- › Environmental Engineering & Analysis
- › Mold Investigations
- › HazMat Incident Investigations
- › Occupational Hazards & Illness
- › Indoor Air Quality
- › Sick Building Syndrome
- › Underground Storage Tanks

OTHER SERVICES:

- › Human Factors & Ergonomics
- › Safety Engineering
- › Reverse Engineering
- › Marine Services and Evaluations



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WHO WE ARE



STEVE PIETROPAOLO, MS, PE, CFEI, DFE **CEO**

Steve Pietropaolo is a Licensed Professional Engineer (P.E.) in the State of New York amongst many others. He is a Certified Fire and Explosion Investigator and a Certified Fire Investigator Instructor. Steve is a Board-Certified Diplomate in Forensic Engineering by the National Academy of Forensic Engineers, where he also serves on the Academy Board, the Fire Investigation Committee, and he is an Associate Editor of the Academy's Technical Journal. Steve has more than 30 years of hands on engineering experience including electrical, mechanical, materials, safety, fire protection, and construction.

He has knowledge of all codes and standards used in the construction industry including building codes, safety codes and industrial codes. Mr. Pietropaolo's expertise is in the field of forensic investigations of product defects, fire/explosions, accidents/injuries, building failures, and electro/mechanical system failures. He also has extensive experience in utility company procedures/equipment and investigating major incidents involving electrical, gas, steam system failures, and construction accidents.

KAREN PIETROPAOLO, MBA **PRESIDENT, LGI FORENSIC ENGINEERING, P.C. & PRESIDENT,** **LGI FORENSIC LABORATORIES, INC.**

Karen Pietropaolo has more than 27 years of business experience, focusing mainly on financial services and banking. She is an experienced professional with expertise in product and project management, strategic marketing plan development, implementation, and execution.

At LGI Forensic Engineering, Mrs. Pietropaolo focuses on the business management of the firm, marketing, client relations, process improvement, product management, company strategy, finance, and budgeting.





ZOEY GUZMAN

VICE PRESIDENT, OPERATIONS

Zoey Guzman is a key member of LGI's management team and oversees the implementation of policies and procedures that ensures the organization runs at maximum efficiency and productivity.

Ms. Guzman leads the administrative staff and works tirelessly to achieve efficiencies of scale for the company. She is also responsible for assisting with recruiting and hiring, as well as instilling an extremely positive and team-focused culture within LGI. Ms. Guzman's tenure at LGI spans nearly two decades. Ms. Guzman has a Bachelor of Arts in English and a Bachelor of Arts in Graphic Design. She is currently on the Board of Directors of The Child Care Council of Westchester.

LANCE WILSON, PHD, CFEI

DIRECTOR – FORENSIC SCIENCE & TECHNOLOGY

Lance holds a Ph.D. in chemistry from North Carolina State University and a B.S. in Chemical Engineering from New Mexico Institute of Mining and Technology. Dr. Wilson is an experienced scientist versed in advanced materials and intricate problem solving. As a member of the management team, he is responsible for the management and maintenance of all laboratory instrumentation under our ANAB ISO IEC 17025 accreditation which ensures accurate data and results.

Dr. Wilson performs material examinations, condition assessment, and failure analyses to aid in cause and origin determination for clients. Lance has a wealth of metallurgical experience and is proficient in a variety of techniques including microscopy, spectroscopy, chromatography, calorimetry, metallography, radiography, organic and inorganic synthesis, mechanical and physical property testing, and elemental analysis. He is well versed in failure analysis and problem solving; from small molecule synthesis to engineering macro materials and their properties.



PATRICK J. VINCENT, SCLA

DIRECTOR, BUSINESS DEVELOPMENT & MARKETING

Patrick J. Vincent is highly experienced in business development management with a diverse background in the insurance, legal and construction industries. He is extremely skilled in creating strong client relationships and developing those relationships to drive new business and revenue. Along with his new business and marketing skills, he is a key part of LGI's leadership team, helping to drive the direction and success of the firm.

Prior to joining LGI, Patrick worked for seven years as a Claims Adjuster for three different insurance carriers, handling both personal and commercial lines claims. Mr. Vincent is also well-versed in fire and water damage restoration, claims law issues, and construction issues.



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