



JAMES G. MARCINIAK, P.E., CFEI, LEED Green Associate
SENIOR CONSULTANT

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Mr. Marciniak is a mechanical engineer with a wide range of expertise and investigative experience, including fire and explosion investigation. His prior industrial experience includes product engineering, manufacturing engineering, and project management in the automotive and custom machinery industries. He has proven expertise developed over decades as a working engineer and investigator in mechanical systems analysis and design, mechanical power transmission, product and process development, manufacturing processes, automated machinery, machine safety systems, heating, ventilation and air conditioning (HVAC), refrigeration, boilers, furnaces, plumbing, and piping.

Areas of Specialization

- Mechanical and Thermodynamic Systems Analysis and Design
- Fire and Explosion Investigation
- Heating, Ventilating and Air Conditioning (HVAC) and Indoor Environmental Quality
- Commercial and Industrial Refrigeration
- Boilers, Furnaces, Pumps, Turbines, Piping, Plumbing, and Controls
- Fuel Gas and Compressed Gas Systems
- Fluid Power Systems – Hydraulics and Pneumatics
- Product Development and Testing
- Manufacturing Processes, Equipment, and Operating Practices
- Automated Machinery, Robotics, Machine Controls, and Safety Systems
- Building Mechanical Systems Commissioning
- Sustainable and Green Building Practices

Education

- M.S.E., Mechanical Engineering, University of Michigan, 1989
- B.S., Mechanical Engineering, University of Notre Dame, 1986

Licensed Professional Engineer (P.E.)

- State of Illinois License No. 062.058758
- State of Alabama..... License No. 35714-E
- State of Indiana License No. PE11600070
- State of Ohio License No. 78121
- State of Oklahoma License No. 29387

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Professional Affiliations

National Society of Professional Engineers

Illinois Society of Professional Engineers

Chicago Chapter

American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

Illinois Chapter

US Green Building Council, Illinois Chapter

USGBC LEED Green Associate

National Association of Fire Investigators

Certified Fire and Explosion Investigator

Positions Held

Engineering Systems Inc., Aurora, Illinois

Senior Consultant, 2009 to Present

BorgWarner Transmission Systems, Bellwood, Illinois

Staff Engineer, Wet Clutch Application Engineering, 1999-2008

Senior Manufacturing Engineer, Friction Products, 1997-1999

Senior Engineer, Advanced Manufacturing Engineering, 1994-1996

Matsushita Electric Corporation of America, Franklin Park, Illinois

Senior Mechanical Engineer, 1990-1994

General Motors Truck and Bus Group, Pontiac, Michigan

Associate Engineer, Manufacturing Engineering Graphics Support, 1987-1988

College-Graduate-in-Training, Flint Assembly Plant, 1986-1987

Other

Member of Board of Education, Riverside-Brookfield HS District 208, 2007-2011

Personnel Committee Co-chair and Member of Teacher Contract Negotiation Team;

Policy Committee Co-chair

Board President 2009-2011

Commissioner, Village of Riverside (Illinois) Preservation Commission, 2004-2007

Representative Past Projects

Mr. Marciniak has conducted over 250 investigations that required mechanical engineering expertise to address a wide variety of litigation and insurance claims large and small, as well as non-litigative engineering consulting. Brief statements describing recent investigation areas are listed here.



Fire and Explosion

Community recreation facility sauna fire
Residential kitchen fire involving electric and gas appliances
Historic bowling alley/bar and grill fire
Auto repair facility fire involving waste-oil heater
Residential fire involving propane gas system
Residential fire involving spray foam insulation
Residential gas explosion and fire with damage to nearby structures
Residential fire involving wood stove and venting

Industrial Fire and Explosion

Industrial waste processing facility explosion
Hospital boiler gas explosion
University powerhouse boiler explosion
CNC machining center fire
Vertical grain conveyor explosion/fire
Asphalt storage tank explosion and fire
Industrial plastic molding machine fire
Fire involving mobile diesel power generation unit
Industrial dust collection system explosion and fire
Industrial facility fire involving sprayed structural foam
Specialty chemical plant explosion and fire
Medical laboratory fire involving lab oven

Heating, Ventilating and Air Conditioning

Senior housing HVAC system water damage and mold claim
Curtain wall building envelope condensation damage
Multifamily HVAC system water damage claim
Residential high-rise chiller freeze damage
Hotel restaurant kitchen exhaust/grease duct fire
Residential air handler coil freeze with flood damage
Community pool geothermal HVAC/dehumidification/IAQ issues
Office building carbon monoxide poisoning investigation
Elementary school HVAC/mechanical tornado damage
Vintage multifamily building pipe freeze investigation
Parking garage slip and fall involving HVAC equipment
Retail strip mall rooftop packaged HVAC unit hail damage
Hospital geothermal system piping failure with flood damage

Refrigeration

Medical refrigerated storage failure
Industrial refrigeration system failures and performance issues
Grocery store refrigeration piping leaks
Large commercial building refrigerant pump failures