

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.

Licenses & Certifications

- State of Illinois P.E. License No. 062058758
- State of Alabama P.E. License No. 35714-E
- State of Indiana P.E. License No. 11600070
- State of Ohio P.E. License No. 78121
- State of Oklahoma License No. 29387

Positions Held

Engineering Systems Inc., Aurora, Illinois

- Senior Consultant, 2009 – 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, 1987-1987
- 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 Negotiation Team; Policy Committee Co-chair

James G. Marciniak
Senior Consultant

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Education

M.S.E., Mechanical Engineering,
University of Michigan, 1989

B.S., Mechanical Engineering,
University of Notre Dame, 1986

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

- Board President, 2007-2011

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

Professional Affiliations

National Society of Professional Engineers

Illinois Society of Professional Engineers

- Chicago Chapter

American Society of Heating, Refrigeration 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

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