

# THOMAS L. BERRY, P.E., CFEI

Senior Vice President



## Summary

Tom Berry is a licensed mechanical engineer with over 35 years of experience designing, managing and investigating mechanical systems and equipment used in a wide variety of industries. He has developed extensive expertise in process/industrial systems, including process equipment, ductwork, piping, and controls integration as well as building systems such as plumbing, HVAC, and utilities. Tom has performed investigations in mining, power and energy, construction, manufacturing, agriculture and petrochemical. He is also a Certified Fire and Explosion Investigator.

## Areas of Technical Expertise

- Mechanical Engineering
- Process Engineering
- Controls and Automation
- Equipment

## Education

- B.S. Mechanical Engineering, 1978, University of Minnesota, Institute of Technology

## Registrations

- Licensed Mechanical Engineer in AZ, AR, CA, GA, MN, NV, OH, OR, TX, and WA

## Professional Activities

- Member, American Society of Mechanical Engineers (ASME)
- Member, National Association of Fire Investigators (NAFI)

## Select Project Experience

### Mechanical Engineering

**Corrosion Evaluation**, Los Angeles, CA. Evaluation of galvanic corrosion potential for assembly of dissimilar metals. Provided opinion on corrosion potential, design standard of care and provided recommendations for mitigation.

**Corrosion Evaluation**, Los Angeles, CA. Peer review of expert opinions regarding disposition of galvanized framing members with "white rust" and chloride contamination. Reviewed reports, suggested testing protocols and researched standards.

**The Address Downtown Dubai, Fire Loss Assessment**, Dubai, UAE. MEP and fireproofing assessment of a 63-story hotel and residential tower, which sustained damage from and extensive fire. Services included on-site investigation, comprehensive damage assessment, interfacing with contractors and owners experts.

**Natural Gas Explosion Risk Study**, confidential location. Performed risk analysis associated with hazards from 12 inch natural gas pipeline distribution system operating at up to 1,000 psig used for gas turbine generators providing back up power for mission critical data storage facilities. Risk analysis included identification of Maximum Credible Events as defined by API 752 for gas release and potential ignition sources.

**Property Condition Assessment, Natural Gas Piping**, Sacramento, CA. Performed condition assessment for natural gas piping serving five California State University Campuses. Provided opinion of probable cost for maintenance and replacement of piping and upgrades to gas entrances including seismic gas shut off.

**Industrial Ventilation Design**, multiple mine sites, Northern NV.\* Industrial ventilation design to reduce airborne mercury in gold refineries to meet National Institute for Occupational Safety and Health (NIOSH) indoor air quality requirements.

\*Denotes work performed with previous employer.

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**High Speed Conveyor Design, Kimberly Clark, Fullerton, CA.** Designed sensing and reject station to detect size differences, compared to scheduled SKU. Developed schematic design for control system upgrade including scanner and vision system.

**Heat Recovery, R&D Building, St. Paul, MN.\*** Design of heat recovery system for a 7-story research building. Run around system recovered heat from laboratory exhaust to preheat outside air intake, which resulted in utility savings.

**Process Engineering**

**Renewable Jet and Diesel Fuel Refinery – Damage Assessment, GA.** Performed damage assessment to hydrogen electrolyzer heat exchanger due to overpressure. Performed damage assessment and root cause analysis into resin screen failure for green ethynol purification as feed to the refinery.

**Copper Smelter Fire and Explosion – Damage Assessment and Peer Review of Origin and Cause, Indonesia.** Performed damage assessment to equipment damaged by fire and explosion. Peer reviewed Origin and Cause. Performed analysis of reinstatement costs.

**Chemical Plant Fire and Explosion, PA.** Performed damage assessment and reinstatement cost estimate for chemical plant after explosion and fire. Equipment included dust collectors, reactors, heat exchangers, filter press, pumps, storage tanks, piping, controls, power distribution and fire protection.

**Bridge Crane Hoist Failure Root Cause Analysis, PA.** Performed root cause analysis for steel plant hoist failure used to transfer ladle from furnace to pour.

**Pea Protein Plant – Dispute Analysis, NE.** Performed investigation into dispute regarding various aspects of the design and construction of a food plant producing pea protein, starch and fiber from raw peas. Performed change order analysis and evaluated new product scaleup.

**Industrial Mineral Processing, Little Rock, AR and Corona, CA.\*** Design of dust control system for overland conveying of crushed granite. Design of bulk clay handling systems, including truck unloading, bulk silos, screw conveyors, weigh hoppers, rotary valves and pneumatic conveying. Evaluation of throughput from clay mixers to inclined furnace, including capacity evaluation of bucket elevators, pug mill and storage silos.

**Precious Metal Mining, Refinery Design, NV\*.** Multiple mine sites. Selection of equipment and design of piping for carbon in leach circuit, electrowinning, filter press, retort furnace and ore furnace.

**Code Analysis, DeQuincy, LA.** Performed code analysis, process hazard evaluation, and site evaluation for the storage and handling of flammable liquids for mixing operations.

**Chemical Plant Design, Hutchinson, MN.\*** Chemical plant design including piping, pipe load analysis, utilities, distillation process, tank farm, loading/unloading, CO2 fire protection and inert gas blanketing, boiler and cooling towers.

**Paper Mill Origin and Cause, LA.** Paper mill explosion investigation including process analysis of flammable vapors, review of management of change procedures and determination of likely ignition source.

**Petrochemical Origin and Cause, LA.** Investigation of a petrochemical plant explosion, including process analysis, materials evaluation and physical damage evaluation.

**Landfill Gas To Energy Root Cause Analysis, Irvine, CA.** Investigation into cause of damage and poisoning to CO catalyst and selective catalytic reduction for 23-megawatt landfill gas to energy plant. Investigated gas treatment and adsorption process for removal of siloxanes.

**Fire and Dust Explosion, Houston, TX.\*** Investigation to determine cause of fire and explosion in frac sand processing system. Established origin and cause as a chain reaction starting with hot spot in thermal oxidizer.

**Chemical Plant Fire Investigation, Hutchinson, MN.\*** Led investigation into flammable vapor fire and catastrophic equipment failure. Performed root cause analysis, developed corrective action plans, led redesign efforts, construction and commissioning.

**Controls and Automation**

**Precious Metal Mining, various mine sites, NV.\*** Design of automated feed system for bulk flux materials. Design of screw feeder for induction furnace. Design of concrete batch plant for underground mine portal. Schematic design for re-commissioned refinery; Design of 1M gal CIL tank.

**Water Treatment Plant, Hanover, NJ.** Analyzed the merit of disputed claims regarding controls integration for wastewater treatment gas to energy plant. Provided opinions of merit based on contract documents. Provided written responses and basis for opinions.

**Equipment**

**Ship Loader Cable Failure, WV.** Performed root cause analysis for the failure of the main hoisting cable for a mobile bulk material shiploader.

**Bridge Crane Hoist, PA.** Performed root cause analysis for steel plant hoist failure used to transfer ladle from furnace to pour.

**Thermal Oxidizer, CA.** Origin and cause analysis of thermal oxidizer explosion.

**Steel Mill, TX.** Root cause analysis of skid pipe failure in steel rehear furnace.

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**Battery Processing**, Reno, NV. Fire investigation involving damage to power distribution, rectifiers, control panels, electrolyzers, process piping, process equipment. Investigation included damage assessment and estimating of repair and replacement costs for specialty equipment.

**Aeration Blower Failure**, El Paso, TX. Root cause investigation into blower failure used for aeration of municipal water treatment plant. Investigation included analysis of maintenance records, SCADA data, and damaged artifacts and interpretation of observations during disassembly of blower and gearbox.

**Smelting Furnace Failure**, Osceola, AR. Investigation into plasma arc furnace failure resulting in loss of charge and fire. Conducted interviews, site examination of refractory, review of operational data and commissioning protocols.

**Potash Processing**, Regina, Saskatchewan, CAN. Investigated damage to crystallizer, heat exchanger and piping caused by collapse of structural supports. Evaluated repair versus replace alternatives and made recommendations for disposition of affected components.

**Complex Fire Investigation**, Macau, CHN. Led scope of damage investigation into fire loss at a large hotel/resort complex while under construction. Coordinated investigation of assets by seventeen contractors, prepared damage maps, equipment matrix and reinstatement methods statement for all affected assets. Evaluated asset and reinstatement costs.

**Brick Tunnel Kiln Investigation**, Mexico City, MEX. Investigation of earthquake damage to 100 meter long brick tunnel kiln including structural support and refractory.

**Concrete Pumper Boom Collapse**, Las Vegas, NV. Investigated root cause of boom collapse including disassembly of main hydraulic cylinder and materials analysis of oil contaminants utilizing SEM, FTIR and 3D digital microscopy.

### Litigation Support

Gypsum Plant Process Design Evaluation, IL. Performed evaluation of the process design and equipment selection for mixing, drying, screening and pneumatic conveying of gypsum.

Bulk Fuel Storage Tank IFR Failure Root Cause, NJ. Performed root cause analysis into the failure of an internal floating roof for a bulk fuel storage tank. Evaluated conformance to inspection standards, API-653, API-510, API-570, evaluated IFR seals and tank level measurements, performed data analysis of fuel levels and evaluation of repairs.

Confidential, investigation into failure of a municipal water treatment plant lift station including finite element analysis, computational fluid dynamics, controls, and basis of design.

Witt & Sohn AG v. CPB Dragados Samsung Joint Venture Parties, Supreme Court of New South Wales. Evaluation of the design, application, and alleged non-conformances of 600 HP axial fan motors used for tunnel ventilation. The investigation included evaluation of motors, bearings, motor standards, water ingress, ingress protection (IPX5), motor grounding and earthing. Sydney, AU.

Dilling Grp., Inc., v. Winona Bldg. Prod., regarding controls integration for a laminated paper processing line and tank farm.

Barker Block HOA v. 530 Hewitt Holding Co., LLC, et al., regarding a standard of care matter related to corrosion failures of Victaulic Couplings.

The Faribault Woolen Mill Co. and Adrian Mill Holdings, LLC v. Thermo-Env't Sys., LLC, et al, regarding standard of care for process design of heat recovery system, equipment, piping and controls integration.

Bowerman Power v. HR Green, regarding alleged design and construction deficiencies in a 23 MW landfill gas-to-energy plant.

### Sworn Testimony

#### Trials

Florida Petroleum Services Inc., Vs. Owen-Ames-Kimball Co., and Travelers Casualty & Surety Company of America, evaluation of design, fabrication and welding for an above ground jet fuel storage tank. April 22, 2026.

#### Depositions

Needham Residential LLC v. Dellbrook Constr. LLC, investigation into the design, construction, and performance of a sub-slab depressurization system (SSDS) for removal of sub-surface volatile organic compounds. June 5, 2025.

MWH Constructors, Inc. v. Metro Water Recovery & KWS Manufacturing Co, LTD., provided expert testimony regarding the design, fabrication and functionality of biosolids handling equipment for a wastewater treatment plant. District Court of Adams County, Colorado. June 5, 2024.

Austin Bldg. & Design, Inc. d/b/a The Austin Co. v. Ingredion Inc., regarding various aspects of the design and construction of a food plant producing pea protein, starch and fiber from peas. District Court of Dakota County, Nebraska. March 15, 2024.

Juan Gracia v. MedStar Ambulance, provided expert testimony related to the condition, operation and function of a patient transport ambulance cot. November 29, 2023.

WV Great Barrel Co., LLC v. Bohnert Int'l, Inc., regarding machine guarding, electrical panel clearances, emergency stops and process exhaust systems. Circuit Court of Greenbrier County, West Virginia. June 10, 2022.

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Covioriente v. Insurers, Bogata, COL, regarding cause and origin investigation of a bridge collapse over the Charte River, highway between Yopal & Aguazul, Casanare de Arbitramento and Conciliacion. March 13, 2020.

T-12 Three, LLC v. Turner Constr., regarding standard of care for plumbing and HVAC design. March 2019.

Confidential Parties, regarding scope of damage to shipbuilding fabrication equipment. November 2014.

**Arbitration and Trial Experience**

Louis Perry Grp. LTD v. Utility Contractors, Inc., evaluation of civil, structural and mechanical claims/counterclaims for a water treatment plant upgrade project. Evaluation of bid documents, bulletin's, change orders, RFI's, contracts, non-conforming work, OSHA 1926, welding and and scope of construction delay items. June 1, 2025.

Arbitration and Deposition, RK Industries, LLC. v. Majestic Commercenter Bldgs II and Majestic Realty Co., regarding evaluation of sheet metal manufacturing operations. December 1, 2022.

**Appraisal Hearings**

Khalil v. Ace-Bankers Standard Ins. Co., regarding swimming pool ventilation and HVAC loss. October 2015.

**CONTACT**

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