

James J. Shields, PE
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Providing expert engineering and consulting services based on over 45 years experience in the design, development and trouble-shooting of: turbines, fluid systems, controls, auxiliary equipment, and instrumentation in power stations. Serving as expert witness in litigations involving: turbines, boilers, pumps, compressors, heat exchangers, filters, fuel stations and delivery trucks, storage tanks, fuel oil, natural gas, propane, and concrete handling systems: piping, hoses, control valves, pressure regulators, controllers, as well as miscellaneous commercial/residential equipment (gas/oil-fired heaters, air conditioning plants, freezers, ovens, water softeners, appliances.

- Testified in cases involving failures of combustion turbines.
- Testified in a case involving the pumping of concrete at a construction site where the delivery line separated, causing serious injury.
- Testified in a case involving a gasoline delivery truck, which was being unloaded using the vehicle (PTO (Power Takeoff) driven pump. The delivery line ruptured, resulting in the fuel being ignited, and seriously injuring the operator.
- Testified in a case involving a residential central air conditioning plant.
- Participated in a case involving two gasoline delivery trucks being simultaneously unloaded, which caught fire, resulting in a fatality.
- Completed investigation in a case involving a failed industrial baking oven at a large supermarket chain in New Jersey.
- Completed investigation in a case involving a gasoline-fired portable electric generator on a commercial delivery truck. The gasoline leaked, caught fire, and resulted in total destruction of the vehicle.

Prepared investigative reports on various cases; e.g., as follows:

- Dangerous leak in an underground storage tank at a gasoline service station in New York.
- Residential natural gas explosions in Pennsylvania and New Jersey
- Failures of filters, hydraulic pistons/accumulators, hoses, and tube fittings, etc.
- Fire caused by improper design of a propane delivery system on a series of industrial ovens in Delaware.
- Fire caused by a leaking underground propane storage tank in Maryland.
- Failures of various residential oil burners/gas-fired heaters and hot water heaters.
- Failure of a hydraulic tube fitting at a pharmaceutical plant in Puerto Rico causing a major fire and several million dollars damage.
- Failures of oil filters on oil burners causing soil contamination and costing several thousand dollars for restoration.
- Failure of a commercial low pressure steam boiler employed in a Maryland restaurant.
- Malfunction of a log splitter in Pennsylvania, causing a serious injury.
- Fire in a gasoline –fired portable generator in Pennsylvania.
- Fire in a residence caused by an underground leak in a natural gas supply line.

B.S.- Mechanical Engineering – Drexel University
Registered Professional Engineer
American Society of Mechanical Engineers