

**ALAN C. GROSSMAN, P.E.**

## **EDUCATION**

B.A. Chemistry - Drew University  
M.B.A. Drexel University  
J.D. Rutgers Law School

## **PROFESSIONAL LICENSES**

2010 Professional Engineer - Florida  
1995 Professional Engineer – Pennsylvania  
1986 Professional Engineer - New Jersey  
1989 Member of the Bar – Pennsylvania  
1989 Member of the Bar - New Jersey  
1989 Admitted to the U S District Court for the Eastern District of Pennsylvania  
1989 Admitted to the U S District Court for the District of New Jersey  
1987-2002 New Jersey Electrical Contractors License  
Certified Mediator, New Jersey

## **CAREER HISTORY**

### **FORCON International – Mechanical Engineer**

Conduct forensic engineering investigations and provide expert witness testimony for cases involving HVAC system and plumbing failures, gas explosions, water and steam damage, fire damage, fire suppression failures, and power and control wiring for commercial, industrial and institutional businesses.

### **HUDSON INTERNATIONAL**

Providing expert technical consulting services based on more than 30 years' experience in design/build projects including field supervision of projects involving HVAC, chilled water plants, refrigeration systems including freon and ammonia systems, walk-in freezers/refrigerators, cold storage warehouses, ice builders, blast freezers heated oil projects, heat recovery, geothermal, steam, natural gas, propane, wet/dry fire suppression, plumbing, power and control wiring for commercial, industrial and institutional clients.

### **Consulting Engineer, HVAC**

Clients include Discmakers, Audio Visual Labs, The Union League of Philadelphia, Crowell Corp., Helvoet Pharma.

**United States District Court for the District of New Jersey** - Mediator/Arbitrator for Magistrate Judges Hedges and Arleo.

### **Attorney, Construction Law** - Solo Practitioner

### **West Jersey Mechanical Services** - CEO and Chief Design Engineer

Duties included design/build engineering, field supervision of mechanical construction (HVAC-Plumbing-Electrical), management, quality assurance/commissioning, electrical power/control installation, specification of wet/dry fire protection systems. Clients included commercial and industrial firms as well as educational institutions located in Eastern Pennsylvania, Southern New Jersey and Delaware.

### **West Jersey Air Conditioning** - Junior Designer, Senior Designer, Commercial Sales, Field Supervisor.

Various titles and duties over 14 years of increasing responsibilities. Design/Build projects include chilled water plants, ice builders, high temperature heated oil systems, clean rooms, evaporative spray systems for static control, clean rooms, office air conditioning, hospital surgical O.R.s, heat recovery, waste heat steam boilers, hot water/steam systems, ATC systems.

**Manufacturing Engineer/Plant Liaison**, Polyester Films, Imperial Chemical Industries.

## **REPRESENTATIVE CASES – PROPERTY AND CASUALTY**

Clean Rooms – July 2017 to August 2019, provided Forensic Consulting for a Law Firm in the defense of a General Contractor that constructed a series of Clean Rooms for a Pharmaceutical Manufacturing Co.

The cleanrooms included the manufacture of both sterile and non-sterile compounding and were subject to FDA requirements of Good Manufacturing Practice Section 503 of the Food, Drug & Cosmetic Act, State of Florida requirements and the Standards set forth by the United States Pharmacopeial Convention (USP) 795 and 797.

The assignment included review of project documentation of cleanrooms ISO Classifications 8 to 5, including all mechanical equipment, duct systems, filter systems, air terminal devices, materials employed to construct floors, walls and ceilings.

In addition to the evaluation of commissioning of the various clean rooms, the assignment included evaluations of the conditions found in the adjacent buffer areas and Ante Areas associated with the clean rooms. Evaluations included observed measurements against established standards for temperature, humidity, microbes and particles.

Other cleanroom projects included design, construction and commissioning of an ISO 7 for a compact disc (CD) mastering facility, an ISO 7 for a pharmaceutical container manufacturer, ISO 7 for several hospital operating rooms and a series of control rooms for a petrochemical refiner.

Natural Gas Explosion - Death of resident and serious injuries to others. Public utility's gas service piping in residence vandalized leading to the explosion of the residence, death, injuries and complete collapse of the structure.

Carbon Monoxide Poisoning- Death of tenant due to landlord's improper renovation of residence, failure to provide adequate combustion air and failure to properly maintain natural gas burning equipment.

Carpenter's Burn Injuries - Worker injured when construction heater ignited his clothing due to heater manufacturer's failure to warn of danger.

Water Damage - Fifty-two story building located Manhattan suffered water damage due to central station air handler coils freezing due to building operator's improper operation of the HVAC system and defectively installed Automatic Temperature Control (ATC/BMS) system.

EIFS Damage at condominium complex - Improper sealing of mechanical contractor's wall sleeves and improper flashing by follow-on trades lead to wholesale replacement of exterior EIFS wall systems at a 20 building complex.

Water Damage - Delayed repairs of a fire sprinkler system by a plumbing contractor at a large, multi-story industrial building allowed the sprinkler main to fail, resulting in flooding the basement and loss of electrical equipment, water damage to the structure and damage to equipment stored there.

Water Damage - Owner failed to service a "dry" fire sprinkler system at a Rehabilitation facility prior to winter. Residual condensed water froze in piping leading to the fire sprinkler activation and resultant water damage on two floors of one wing of the facility.

Steam Damage - Central humidification system at a surgical center failed when its control valve stem fractured, allowing the system to run wild. Valve manufacturer's stem sub-contract manufacturer improperly machined valve stem, resulting in its failure.

Mold and Water Damage - Defective design by the Project Architect and defective construction of the building required replacement of significant portions of the structure and mold remediation.

Fire Damage - Kitchen exhaust hood's "Ansul" type fire suppression system failure to extinguish a deep fryer cooking oil fire due to Owner's failure to maintain equipment and lead to remediation of damage in the 50,000

# FORCON INTERNATIONAL

square foot building. Prepared Building Code review to support our party's claim that the Owner's claims were excessive.

Fire Damage - Commercial laundry dryer investigation; total loss of the building and contents.

Fire Damage - Automobile paint shop's fire protection system failure to extinguish the fire due to Owner's failure to minimize combustible materials as required by Code.

Chemical Reactor Tank Failure - Owner modified pressure relief devices rendering them ineffective leading to tank failure and dangerous chemical discharge with-in and outside the plant.

Investigation of the cause of a fire loss aboard 90 foot maritime vessel associated with a failure of the climate control system.

Investigation of a water damage claim aboard a 140 foot maritime vessel where a condensate piping connection was inadvertently connected to condenser water piping drain.

Investigation of the loss of a 200 ton air conditioning system that was damaged as a result of a hurricane.  
Investigation of the failure of a six story condominium's CPVC fire sprinkler system where the pipe exhibited stress cracks and solvent fitting failures.

Investigation of personal injury claim resulting from an air compressor failure.

Investigation of a 500 ton centrifugal chiller failure due to erosion of the condenser tube bundle.

Investigation of the failure of an ammonia refrigeration system serving an ice skating rink including damage to compressors and brine system.

Investigation of a chemical fire suppression system's inadvertent discharge at a factory clean room/control room.

Investigation of the claim of loss due to improper HVAC systems at a pharmaceutical manufacturing plant.

Investigation of a claim of failing to properly install a fire hydrant associated with the death of a motor vehicle driver.

Investigation of an explosion associated with a propane gas fueled stove installed in a recreational vehicle resulting in personal injuries.

Investigation of the failure of a solar panel system servicing a factory which resulted in a fire and the loss of the panels, inverters and switchgear.

## **REPRESENTATIVE CASES – SURETY**

Owner claimed that General Contractor failed to provide temperature and humidity levels it deemed appropriate in its classrooms. General contractor built the project as required by the project plans and specifications which was not a performance specification. Project Engineer held at fault and subsequently modified control sequences.

Owner terminated General Contractor's Agreement for failure to complete the college building on schedule. Completed review of elements of construction requiring completion. Negotiated with Public Owner. Contacted existing sub-contractors and additional sub-contractors to bid on the completion of the project. Took bids for completion.

Owner claimed mechanical contractor failed to properly install the building's HVAC system, leading to moisture damage to the building. Remedial work proved the Project Engineer not the contractor was at fault for failure to properly specify the required amount of mechanical insulation for the project.