

Miles F. Buchman, B.S., M.S.E.

Consulting Engineer, Metallurgist, and Materials Engineer involving construction and work place safety; motor vehicle design, repair, and failure analysis; machine design, guarding, and operation; product applications and improvements; garage door systems and operators; plumbing and HVAC system component failure analysis, materials specifications, failure analysis, and testing.

EDUCATION: Bachelor of Science Degree in Metallurgy and Material Science,
University of Pennsylvania 1970
Master of Science Degree in Engineering, Metallurgy and Material Science,
University of Pennsylvania 1973

PROFESSIONAL ORGANIZATIONS & MEMBERSHIPS

ASM International
ASME – American Society of Mechanical Engineers
NFPA – National Fire Protection Association
SAE International – Society of Automotive Engineers

PROFESSIONAL BACKGROUND

2002-Present – Fleisher Forensics – Ambler, Pennsylvania:

Engineer, Metallurgist, and Materials Engineer responsible for inspection of incidents and evaluating matters involving failure analysis, processing methods, material properties, vehicles, machine guarding and work place safety. Consulting in design, specifications, testing, product applications and product improvements involving mechanical systems and materials including matters involving the following areas among others:

- Motor vehicles:
 - Trucks, trailers, passenger cars, and limousines
 - Earth moving equipment and off road trucks
 - Construction equipment including loaders, concrete pumping equipment, and excavators
 - Lawn and garden equipment including tractors, mowers, log splitters
- Metallurgy and Materials Science:
 - Failure analysis and testing
 - Corrosion studies
 - Medical device failure analysis
 - Bottle and glassware failure analysis
- Material handling equipment:
 - Racking and shelving
 - Forklift trucks and high stacker trucks
 - Pallet jacks, manual and powered
 - Dock levelers and ramps
 - Powered and unpowered carts
 - Conveyors
 - Material handling equipment

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- Construction:
 - Construction management
 - Site safety and accidents analysis
 - Restraint systems and guarding
 - Man lifts and elevating work platforms
 - Ladders, scaffolds, and staging
- Machine design, safety and guarding:
 - Machine tools and associated feeding equipment
 - Production wood cutting, forming and shaping equipment
 - Gym training and exercise equipment
 - Automated production equipment and metal forming equipment
 - Power hand tools, electrical, pneumatic, and powder activated
 - Food equipment including mixers, coffee makers and bakery equipment
 - Trash compactors and balers
- Furniture:
 - Seating including bar stools and chairs
 - Restaurant booths
 - Office equipment and bed frames
- Handicap accessibility:
 - Stair lifts
 - Wheel chair platform lifts
- Doors and door systems:
 - Door and overhead doors
 - Windows and gates
 - Closers and operating devices
- Retail equipment:
 - merchandising displays, racking, and shelving,
 - supermarket bag dispensers
 - shopping carts
- Plumbing and HVAC:
 - Equipment design, safety, and failure analysis
 - Sprinkler systems failure analysis
 - Plumbing fixture and piping system installation and failure analysis

1987-2003 – A & M Garage Doors – New Britain, Pennsylvania:

President - responsible for overhead door and operator design, code compliance, mechanical service, ladder safety, installation and implementation of safety programs and damage evaluation.

1969-Present – A & M Classics – Furlong, Pennsylvania:

Automotive mechanic and historian - responsible for vehicle repair and restoration, engine building, component application and design, parts interchange and improvement, and technical support.

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1985-1987 – Fuel Tech Inc. – Stamford, Connecticut & Houston, Texas:

Technical Director - responsible for development and testing of fuel additives for gasoline and diesel engines, laboratory and fleet testing, work place safety, equipment guarding, product development, and liaison with state and federal agencies.

1984-1985 – Scott Environmental Technology Inc. – Plumsteadville, Pennsylvania:

General Manager of Vehicle Emissions Certification Laboratory - responsible for design, construction, and operation of mobile source emissions testing laboratories with Federal EPA recognition. Designed vehicle emissions control system components. Responsible for training, work place safety and equipment guarding.

1979-1984 – Johnson Matthey Inc. – Wayne, Pennsylvania:

Senior Research Engineer - responsible for group research through customer acceptance fleet trials, pilot and full scale production plant design, test facilities design, operation for a vehicle exhaust pollution control system, work place safety and guarding. Expertise involved the design, testing and production of automotive and truck components, metallurgy and material specification and testing, test program administration with vehicle and engine manufacturers, liaison to state and federal agencies for regulatory issues with EPA and CARB, and plant site environmental permit responsibility.

1977-1979 – Montgomery Beer & Soda Inc. – Montgomeryville, Pennsylvania:

Manager of Operations & Vice-President - responsible for operations, facilities and equipment maintenance and installation, warehousing, forklift training and operation, truck loading/unloading scheduling and deliveries.

1976-1977 – Sermetel Inc. – Limerick, Pennsylvania:

Coating Engineer - responsible for research and development in high temperature and corrosion resistant coatings for aerospace and automotive applications including, diffusion studies, prototype and new application development, metallography, work place safety, design and construction of test and production equipment.

1974-1975 – Handy & Harmon Tube Co. – Norristown, Pennsylvania:

Metallurgist & Facilities Engineer - responsible for product and new equipment development for a stainless steel and alloy tube mill including contracting and installation, start up and specifications for a vacuum furnace system, annealing, drawing and furnace atmosphere cost reduction, design and development of processing equipment, work place safety and machine guarding.

1973-1974 – Dresser Industries Hand Tool Division – Defiance, Ohio:

Plant Metallurgist & Facilities Engineer - responsible for alloy and heat treat specifications, material quality control, product testing for forged hand tools, work place safety and machine guarding. Design, specify, and install equipment for production metallurgical testing laboratory. Plant facilities upgrade involving the design, purchase and installation of plant electrical substation and power upgrade, automated plating and heat treating furnace facilities design, contracting, and installation.

Pollution Control Consultant - State pollution control source permit applications and pollution control device engineering.