

THOMAS P. SHEFCHICK, PE
PROFESSIONAL CREDENTIALS

ENGINEERING INVESTIGATIONS & ANALYSIS

4456 Danube River Ln.

Sacramento, CA 95834-7506

(408) 9815023

WWW.SHEFCHICK.COM

SHEFCHICK@COMCAST.NET

EXPERTISE

Engineering investigation and analysis to determine the cause of electrical malfunctions, failures or injury in the following areas:

FIRES

- The Origin and Cause of Fires.
(over 550 detailed investigations
electrical, non-electrical, arson)

LIGHTNING STRIKES & POWER SURGES

- Verification of Lightning Damage
or Surge and Extent of Damage.
(computers, telephone systems,
video equipment, transformers,
power equipment & home appliances)

ELECTRICAL SHOCKS & ELECTROCUTION

- Determination of Cause and Party
or Parties at Fault

SHIPPING DAMAGE

- Verification of Shipping Damage and
Extent of Damage to Electrical Equipment

ELECTRICAL

- Power Distribution, Transformers,
Circuit Breakers, Starters,
Lighting Equipment, Factory, Commercial
and Home Wiring, Electrical Machinery,
Motors, Compressors, Air Conditioners,
Refrigerators and Appliances

ACCIDENT RECONSTRUCTION

- Reconstruction of accidents to
determine causation factors

PHOTOGRAPHY

- Accident Scenes & Evidence
35mm, digital and/or video

*** This C.V. shall not be used to list Thomas P. Shefchick, P.E. as an expert unless he has been retained.

Qualifications

EDUCATION

B.S., Electrical Engineering, Rutgers University, New Brunswick, NJ, 1969

Industrial Systems Control Seminar, Westinghouse Electric Corporation, 1970 and 1975

Power Products Seminar, Westinghouse Electric Corp., 1978

Concepts of Chemical Engineering Seminar, McGraw-Hill Center, 1980

Process Hazards Analysis Seminar, Air Products and Chemicals, 1980

Electrical Construction Seminar, McPartland, 1980

Arson Seminar, New Jersey Chapter, International Association of Arson Investigators, 1982

Conference on Arson and Fire Investigation, Rutgers University, 1983

Microprocessor Seminar (Intel 8085), I.E.E.E., Dr. Edward Page, 1983

Arson Seminar (Automotive), New Jersey Chapter, International Association of Arson Investigators, 1984

International Association of Arson Investigators Conference, 1984, 1986, 1987, 1988, 1991, 1992, 1997, 1998, 2001, 2003, 2010, 2011, 2013, 2014, 2016, 2017, 2018

Electrical Fires - Causes, Investigation, Analysis and Prevention, Hughes Institute, 1984

Design Liability Seminar - How to Avoid Construction Claims, Victor O. Schinnerer & Co., N.Y.N.Y., 1985

Resolving Construction Conflicts: Alternatives to Litigation, American Arbitration Association Seminar, Atlantic City, New Jersey, 1985

Juvenile Firesetters, Rutgers University, New Jersey Chapter, International Association of Arson Investigators, 1986

Florida Fire and Arson Investigation School, Florida IAAI & PARCO, 1987, 2014

Investigations of Electrical & Appliance Related Fires

A Technical/Scientific Approach - July 26-28, 2006 West Palm Beach

Lightning Protection Technology Seminar, The School of

Lightning Protection Technology, Philadelphia, 1987
Forensic Evidence Photography, Rochester Institute of
Technology, 4/11-14/88
Fire & Arson Investigation Procedures, Morris County Fire &
Arson Investigators Association, 10/15/88
Arson Detection, Pennsylvania Association of Arson
Investigators, Philadelphia, 10/22/88
Management of Electromagnetic Energy Hazards,
Rutgers University, New Brunswick, NJ 11/1-3/88

American Academy of Forensic Sciences Conference,
Philadelphia-1988, Las Vegas-1989, Cincinnati-1990, Anaheim-1991, New Orleans-1992, Boston-1993,
San Antonio-1994, Seattle-1995, Nashville-1996, New York-1997, San Francisco-1998, Orlando-1999
Sparks, NV-2000, Atlanta-02, Chicago-2003, Dallas-04, New Orleans-05, Seattle-06, Wash. DC-08
Denver-09, Seattle-2010, Seattle-2014, Orlando-2015, Las Vegas-2016, New Orleans-2017, Seattle-18
How To Be a Better Expert Witness, American Academy of Forensic Sciences, 2/20/90

Property Loss Managers Conference, San Diego, 3/90

Fire & Explosion Tests in Association with Agents of The
Bureau of Alcohol, Tobacco & Firearms, New Orleans 4/90
International Association of Forensic Sciences Conference,
Adelaide, Australia 10/90; Dusseldorf, Germany, 8/93, Montpellier, France, 9/02
National Academy of Forensic Engineers Conference,
Grand Rapids, 7/91; Kona, Hawaii, 1/27/93; Pittsburgh, 7/21/93; Houston, 1/95
Louisville, 7/26/95; Portland, 1/24/96; Sparks, NV, 1/98; Norfolk, 7/31/2000,
Los Angeles 1/2001, Detroit 7/2001, San Francisco 1/2003, Washington, DC 1/2004
Honolulu 7/04, San Deigo 1/05, Chicago 7/05, Washington, DC 1/06, Boston 7/06,
Jacksonville, FL 1/07, Denver, CO 7/07, San Juan, Puerto Rico 1/08, Portland 7/08
Austin, Texas 1/09, St. Louis 7/09, New Orleans 1/10, Orlando 7/10, Tuson 1/11, Las Vegas 7/11,
San Diego 7/12, Minn 5/13, Washington, DC 7/14, Dallas 7/15, Seattle 7/16, New Orleans 1/17, Phoenix 18
Advanced Fire Scene Analysis, International Association of Arson Investigators,
& National Fire Protection Association, St. Louis, 2/27-29/92
Society of Forensic Engineers & Scientists Seminars,
5/90, 5/91, 2/92, 10/92, 10/93, 1/94, 4/94, 8/94, 10/94, 4/95, 8/95, 9/95, 4/96, 9/96, 1/97, 9/98, 1/99,
4/99, 1/2000, 4/2000, 2/2001, 10/2001, 1/02, 3/02, 7/02, 8/02, 9/02, 11/02, 2/03, 5/03, 10/03, 1/04,
4/04, 7/04, 1/05, 7/05, 10/05, 1/06, 3/06, 10/06
National Forensic Center Seminars
12/89, 12/93, 12/94, 11/95, 11/96
Second Symposium of Forensic Sciences, Institute of Forensic
Research in Krakow, Poland, 9/20-23/94 Guest of Honor
California Conference of Arson Investigators Seminars - 1996, 1997, 1999, 2000, 2002, 2004, 2008, 2009, 2010,
2011, 2012, 2015
New Jersey Chapter of IAAI Seminars - 2003, 2004, 2005
Hawaii Chapter of IAAI Seminars - 2001, 2004, 2005, 2007, 2009, 2010, 2011, 2012

-4-

EXPERIENCE

- 1983-Present
Independent Consulting Electrical Engineer,
Engineering Investigation and Analysis for
Insurance Companies, Law Firms, US attorneys,
US Army and US Air Force.
Court Qualified Expert Witness in Litigation involving:
electrical design, installation, maintenance, electrocution,
electric shock, lightning, origin of fires and causes of fires.
Assist State, County and Municipal officials in
determination of fire cause.
- 1981-1983
Consulting Electrical Engineer, Paul Zamrowski
Associates, Inc., Berwyn, Pennsylvania.
Engineering Investigation of Claims and Losses
involving electrical energy, (lightning,
strikes, fires, explosions, electrical shocks,
and failures of electrical equipment).
- 1980-1981
Senior Electrical Design Engineer, Air Products and Chemicals, Inc.
Responsibilities Included:
- Project Estimating & Electrical Power Design
- Developing Job Scope & Writing Specifications
- Evaluating Vendor Quotes & Selecting Vendors
- Vendor Equipment Inspections
- Assisting Construction Group with Installation and Commissioning
- Investigation of Re-occurring Electrical Problems
- 1979-1980
Electrical Project Manager, American Biltrite, Inc.
Responsibilities Included:
- Project Design, Estimates & Selection of Equipment
- Supervision of Installation of New Equipment & Modifications to Existing
- Implementing Preventive Maintenance Programs
- Trouble-shooting of Electrical Equipment

1969-1979

Field Service Engineer, Westinghouse Electric Corporation, Philadelphia District.

Responsibilities Included:

- Supervising & Training Associate and Customer Engineers
- Marketing Engineering Services
- Writing Proposals & Selling Them
- Evaluating Proposals of Salesmen
- Training Salesmen How to Bid & Write Proposals
- Preparing & Teaching Courses to Customers
- Trouble-shooting Westinghouse & Other Vendor's Equipment
- Developing New Markets for Engineering Services
- Providing Start-up (Commissioning) Services on Foreign & Domestic Projects
- Modification of Equipment to Eliminate Design Deficiencies
- Set-up & Performed Preventive Maintenance Programs for Customers

MAJOR DOMESTIC PROJECTS 1969-1980

- American Biltrite, Inc. - Extrusion Line, Sterline .
Extruder with Harrel
Microprocessor Control

- Penn Central RR - Northeast Corridor Metroliners

- US Steel Corp. - T.F.S. Line at Fairless Hills, Pa.
- 80" Single Stand Cold Mill at Fairless
- 5-Stand Cold Mill at Pittsburgh, Ca.

- Bethlehem Steel Corp. - Structural Mill, Bethlehem, Pa.

- Lukens Steel Corp. - Continuous Casting Machine,
Electric Arc Furnace,
Coatesville, PA

- Delaware River Port Authority - Locust St. Substation, (700VDC)
Philadelphia, PA

- Weyerhaeuser Corp. - Paper Machine, Miquon, Pa.

- US Post Office - Maintenance of 30th Street
Facilities, Philadelphia, Pa.

- Metropolitan Edison Co. - 3-Mile Island Nuclear Power Plant

- Bell Telephone of Penna. - Maintenance of Indoor Substations

- Colonial Pipeline Co. - Maintenance of Outdoor Substations

- Martin Marietta Corp. - Dust Collectors for Cement
Plant, Northampton, PA

MAJOR FOREIGN PROJECTS 1971-1978

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|---------------------------------------|---|--|
| China Steel Corp. Taiwan | - | Start-up of Billet, Bar, and Rod Mill, Taiwan, ROC |
| Taiwan Machine Corp. Taiwan, R.O.C | - | Start-up of Tin Plating Line, |
| Chia Hsin Cement Co. Taiwan, ROC | - | Start-up of New Cement Plant, |
| R. M. L. Yugoslavia | - | Start-up of Rod Mill, Zenica, (near Sarajevo) |
| San Rafael Y Anexas, S.A. | - | Start-up of Roll Grinding Machine, Mexico |
| Usinor France | - | 80” Hot Strip Mill, Dunkerque, Coil Handling Conveyors Dunkerque 2 Stand Cold Mill, Mardyck |
| Solmer France | - | Start-up of Two Ship Unloaders Built by Dravo, Fos Sur Mer, |
| Sidor Venezuela | - | Start-up of Scarfing Machine Built by Union Carbide, Porto Ordaz, Venezuela Trouble-shooting of Tinning Line, Porto Ordaz, Venezuela |

MISCELLANEOUS PROJECTS

1969-1979

Motor Control Centers in Various Locations

Transformers - Air, Oil and Enerteen Type,
Installation, Modifications and
Trouble-shooting for
Philadelphia Electric Company,
Metropolitan Edison Company,
contractors and commercial companies.

Circuit Breakers - 13.2 K.V.A.C. to 110 V.A.C.,
Start-up Installation, Troubleshooting
and Maintenance for various customers.

Trouble-shooting for:

American Dredge Corporation
Army Corps of Engineers
Dupont Corporation
S.C.M. Corporation
Scott Paper Corporation
Midvale Heppenstall
Warner Corporation
Smyrna Prison
University of Pennsylvania
Bloomsburg State College
Schaefer Brewing Company
Dover Air Force Base
Grocery Store Products
Westfield River Paper Company
Alanwood Steel Corporation
A.E. Staley Company
A& B Electric Company
Paterson Parchment Paper Company
I.N.A. Insurance Company
Academy Tankers, Inc.
American Baptist Church
Mack Truck Corporation
Pennsylvania State University
General Machine Corporation
Pangborn Corporation
First Pennsylvania Bank
US Steel Corporation
Lukens Steel Corporation

LICENSES AND MEMBERSHIPS

Licensed Professional Engineer in the States of:

New Jersey, Pennsylvania, Delaware Inactive, New York Inactive, Hawaii,
Florida, and California

Member, National Society of Professional Engineers
Past President Santa Clara County Society of Professional Engineers

Fellow, American Academy of Forensic Sciences
Program Chairman, Engineering Section, American Academy of Forensic Sciences-1996
Secretary Engineering Section – 1997
Chairman Engineering Section –1998
Founders Award Engineering - 2015

Past-President - National Academy of Forensic Engineers
Fellow & Diplomate, National Academy of Forensic Engineers
Vice-President - 2005, Senior Vice-President - 2006, President Elect - 2007
Chairman Website Committee, Chairman Admissions Committee – 2007
President - 2008

Chairman, Engineering Section, International Association
of Forensic Sciences, 1993

Emeritus Member, Society of Forensic Engineers & Scientists

Senior Member, Institute of Electrical and Electronic Engineers
Board of Directors –IEEE- Product Safety Engineering Society

Member, International Association of Arson Investigators
New Jersey Chapter #17 of IAAI Emeritus
California Conference of Arson Investigators
Hawaii Chapter IAAI Emeritus

Member, National Fire Protection Association

Member, International Blue Goose - San Francisco Pond

Certified Diver

PRESENTATIONS

The Nature, Protection Against, and Investigation of Lightning
Damage - Philadelphia Loss Conference - 1983

Techniques and Methods Used to Investigate Electrical Fires
Philadelphia Loss Conference & New Jersey Society of Professional Engineers - 1984

Careers in Electrical Engineering - Rutgers University - 1984 & 1987

Electricity: A Cause of Fires?
N.J. Chapter International Association of Arson Investigators - Rutgers University - 1987

Investigating the Electrical Fire - Rutgers University -6/13/88

Burn Patterns in Electrical Fire Investigation &
Electrical Fires with Multiple Points of Origin
American Academy of Forensic Sciences - 2/23/90

Forensic Electrical Engineering: Fire, Electrocution & Failures
The Society of Forensic Engineers & Scientists - 5/18/90

Forensic Electrical Engineering: Electric Shock, Lightning
Fraud and Power Surge Fraud
Mercer County Society of Professional Engineers - 10/3/90

Electrical Fires
13th Annual Fire & Arson Investigation School - Florida
Chapter IAAI - 3/18/91

Electrical Fires & Analysis of Fire Scene Material
Live Television Broadcast University of Hawaii – HITS- 8/13/91

Electrical Fires Accidental & Deliberate
IAAI Training Conference - Atlanta, Georgia - 12/6-8/91

Electrical Fires
PAAI Training Seminar - Montgomery County Fire Academy -1992

Electrical Safety For The Forensic Scientist
American Academy of Forensic Sciences, 2/22/92

Forensic Electrical Engineering, Fuses, Circuit Breakers & Fires
International Association of Electrical Inspectors, Allentown, Pa. - 5/20/92

Electricity's Involvement With Fire, Potential Electrical Fire Causes,
Electrical Fire Investigation and Electrical Testing
Honolulu Fire Department Training Seminar - 8/10/92

Forensic Engineering's Believe It Or Not Kona, Hawaii-1/27/93,
 (Transformers, Telephones & Arson) National Academy of Forensic Engineers Conference
 Overlamping of Recessed Light Fixtures
 American Academy of Forensic Sciences Conference - 2/93
 Introduction to Forensic Engineering - Dusseldorf, Germany - 8/23/93
 International Association of Forensic Sciences
 Forensic Engineering - Definition, Education, Testing, Disciplines, When to Call and Answers
 The Hawaiian Claim Association - Hilton Hawaiian Village - 9/24/93
 Fire Investigation & Electrical Injury & Damage
 Society of Forensic Engineers & Scientists - Hilton Hawaiian Village - 4/24/94
 Comparison of American and European Residential Circuit Breakers
 American Academy of Forensic Sciences-2/17/95
 Electrical Injury & Electrocutation
 National Academy of Forensic Engineers - 1/24/96
 Temporary Power Taps -American Academy of Forensic Sciences - 2/21/97
 Electrical Injury & Electrocutation - American Academy of Forensic Sciences - 2/98
 - Central Coast Claims Association - 3/19/98
 Fire at Sea – American Academy of Forensic Sciences – 2/99
 Pele Visits Kohala - Society of Forensic Engineers & Scientists – 4/17/99
 Electrical Fires, Shock, Damage & Fraud – San Francisco Insurance Forum – 4/21/99
 Ship Fires – National Academy of Forensic Engineers – 7/2001
 Electrocutation, Electrical Injury & Electrical Damage – San Francisco Insurance Forum -1/16/2002

Automobile Accidents, Fires and Defects - Society of Forensic Engineers & Scientists, Paris, France-8/28/02
 Electricity Took The Vandal's Hands - International Society of Forensic Sciences, Montpellier, France-9/5/02
 Extension Cords & Closets Don't Mix- International Society of Forensic Sciences, Montpellier, France-9/6/02

Using Digital Video For Investigations, Analysis & Presentations-SFES--Honolulu, Hawaii 1/24/04
 Seeing Both Sides Of The Coin - AAFS- Dallas, Texas-2/19/04
 Safety Code Violations, Corrections & Replacements- AAFS- Dallas, Texas-2/19/04
 Forensic Engineering Use of Digital Video - National Academy of Forensic Engineers, Honolulu 7/2004
 Harmonics and Using Digital Video to Investigate Fires- NJIAAI, Atlantic City, 3/2005
 What Do Forensic Electrical Engineers Really Do? Central Coast Claims Association. 11/16/06
 Personal Injury Cases Involving Electrical Controls & Electrical Distribution, East Bay Claims 2/14/07
 Forensic Engineering Use of Digital Fixed Lens, SLR and Video Cameras, San Juan, Puerto Rico 1/5/08
 Fires, Firesetters and Investigating Experts- American Academy of Psychiatry and the Law- Seattle 10/23/08
 Fires and Explosions: A Multidisciplinary Overview of Investigative Methods, Mental States & Trauma
 American Academy of Forensic Sciences – Seattle 2/23/2010
 Electrical Safety Components Sometimes Cause Damage – AAFS Orlando 2/2015
 Sometimes Electrical Work Results in Damage, Fire, Injury or Electrocutation –AAFS Orlando 2/2015
 Sometimes Deficient Electrical Installations Result in a Fire – AAFS Orlando 2/2015

QUALIFIED AS AN EXPERT WITNESS

CALIFORNIA, DELAWARE, HAWAII, NEW JERSEY, PENNSYLVANIA,
 VIRGINIA, & US FEDERAL COURT

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| COURTROOM TESTIMONY | Twenty-nine (29) Trials |
| DEPOSITION TESTIMONY | Seventy –three (73) Cases |

PARTIAL LIST OF CLIENTS 1981-2016

Aetna
Allied Group Insurance
Allstate Insurance Co.
American Insurance Group
Atlantic & Pacific Tea Company
Atlantic Mutual Insurance Co.
California State Automobile Association
California Insurance Group
CHUBB & Son
Cigna
CNA
Crawford Adj. Company
Continental Insurance Co.
Crum & Forster
Dai-Tokyo Fire & Marine Insurance Co., Ltd.
The Dentists Insurance Company
Encompass Insurance Company
The Fair Plan Insurance Co.
Farmers Insurance Co.
Fireman's Fund
First Insurance Company
Franklin Mutual Insurance Company
GAB/GAB Robins
Home Insurance Company
Island Insurance Company
Kemper Insurance Company
Law firms (Defense & Plaintiff)
Liberty Mutual Insurance Company
Lloyds of London
Nautalis Insurance Company
Pacific Insurance Company
Proctor-Silex
Prosecutor's Office
Prudential Insurance Company
Public Defender's Office
Public Service Electric & Gas Company
Reliance Insurance Company
Royal Insurance Company
Sentinel Insurance Company
Scottsdale Insurance Company
The Travelers Insurance Company
Trade Winds Insurance
Transamerica Insurance Group
USAA Insurance Company
US Air Force US Army
US Attorney's Office
US F & G Insurance Company
Wausau
Zenith Corporation

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