

THOMAS P. SHEFCHICK, PE  
PROFESSIONAL CREDENTIALS

ENGINEERING INVESTIGATIONS & ANALYSIS

4456 Danube River Ln.  
Sacramento, CA 95834-7506

(408) 981-5023

(866) 420-7955 FAX

WWW.SHEFCHICK.COM  
SHEFCHICK@ATT.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, Tucson 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

## 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 .<br>Extruder with Harrel<br>Microprocessor Control   |
| Penn Central RR                  | - | Northeast Corridor Metroliners   |
| US Steel Corp.                   | - | T.F.S. Line at Fairless Hills, Pa.<br>- 80" Single Stand Cold Mill at Fairless<br>- 5-Stand Cold Mill at Pittsburgh, Ca. |
| Bethlehem Steel Corp.            | - | Structural Mill, Bethlehem, Pa.  |
| Lukens Steel Corp.               | - | Continuous Casting Machine,<br>Electric Arc Furnace,<br>Coatesville, PA  |
| Delaware River Port<br>Authority | - | Locust St. Substation, (700VDC)<br>Philadelphia, PA  |
| Weyerhaeuser Corp.               | - | Paper Machine, Miquon, Pa.   |
| US Post Office                   | - | Maintenance of 30th Street<br>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<br>Plant, Northampton, PA   |

MAJOR FOREIGN PROJECTS 1971-1978

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  
 Overlapping 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 & Replacemnets- 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

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

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