

Electrical Incidents Investigation

A comprehensive program to build competency in electrical incident response, technical investigation, root-cause analysis, and evidence-based reporting for safer, compliant workplaces.

D A T E S

19th - 21st
August 2026

V E N U E

Johannesburg -
South Africa

Mr. David Davenport

Chief Consultant Engineer - ESIPAC
Technical Director - Transmag UK

C O U R S E T R A I N E R

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🌐 www.indulead.com

INDULEAD
INDUSTRY LEADERS

Electrical Incidents Investigation

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Course Overview

This 3 day course provides participants with the knowledge and practical skills needed to investigate electrical incidents safely, effectively, and in accordance with legal and organisational requirements. The program covers electrical hazard fundamentals, incident causation, evidence collection, interviewing techniques, root cause analysis, and reporting. Participants learn how to analyse electrical failures, identify contributing human and technical factors, reconstruct event timelines, and develop corrective actions to prevent recurrence. Through case studies and practical exercises, attendees gain confidence in managing incident scenes, assessing equipment damage, and producing clear, defensible investigation reports.

Key Learning Outcomes

By the end of the 3-day course, participants will be able to:

- Conduct a structured investigation of electrical incidents
- Identify root causes and contributing factors
- Apply electrical knowledge to forensic analysis
- Recommend effective corrective actions
- Prepare professional, defensible investigation reports

Why You Should Attend?

You should attend to gain the skills needed to properly investigate electrical incidents, identify root causes, prevent future occurrences, and ensure legal and safety compliance. The course helps you protect people, equipment, and operations by teaching you how to analyse failures, collect evidence, and make informed, defensible recommendations.

Course Facilitator

David Davenport

Chief Consultant
Engineer - ESIPAC
Technical Director -
Transmag UK



David Davenport is an experienced electrical engineer with over 50 years' experience in Mining, Heavy Industry, Oil & Gas and Critical Power. Working for companies including Rolls Royce, Bae, Siemens and Barlow Rand in his lengthy career. He is Vice-President and Chief Engineer for the Global Safety Standards organisation www.ESIPAC.online

David has conducted over 150+ training programs, seminars and workshops worldwide, mentoring 1,500+ professionals in electrical safety and excellence in installations, commissioning and testing, safety and monitoring solutions, electrical design, project work and planning engineering. He is also a key-notespeaker at international conferences on electrical safety and excellence

Expertise & Certifications

Chartered Electrical Engineer. Member of Institute and Engineering Technology an IEEE member and a Fellow of the Institute of Leadership and Management. A fully compliant and IOSH certified in electrical safety. David is himself an LVAP, HVSAP and an Authorised Engineer with many years of process documentation and hands on switching experience.

Clientele



nationalgrid



BAE SYSTEMS



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Day 1

Foundations of Electrical Safety & Incident Response

Session 1: Introduction & Legal Framework

- Purpose and scope of electrical incident investigations
- Legislation(s) overview:
 - Electricity at Work Regulations (EAWR)
 - OSHA/Health & Safety at Work Act
 - RIDDOR reporting requirements
- Employer/employee responsibilities

Session 2: Understanding Electrical Hazards

- Electric shock, electrocution, burns
- Arc flash / arc blast
- Fault currents, overloading, and short circuits
- Typical workplace scenarios and risk factors

Session 3: Immediate Response to Electrical Incidents

- First response protocols
- Isolation, lockout/tagout (LOTO) procedures
- Securing the scene
- Evidence preservation and avoiding scene contamination

Session 4: Investigation Principles

- Reactive vs proactive investigations
- The incident timeline: before, during, and after
- Types of evidence: physical, documentary, digital, testimonial

Session 5: Case Study Workshop #1

- Review real incidents
- Group discussion: causes, failings, and preventable measures

Day 2

Technical Analysis & Root-Cause Methods

Session 1: Technical Assessment of the Scene

- Assessing electrical installations safely
- Inspection of switchgear, cables, terminations, and protection devices
- Identifying evidence of:
 - Arcing
 - Overheating
 - Component failure
 - Tampering or misuse

Session 2: Tools & Techniques for Technical Investigation

- Electrical measurement tools
- Insulation and continuity testing
- Checking protection coordination
- Understanding equipment protection curves

Session 3: Interviews & Witness Handling

- Structured questioning
- Recording statements
- Avoiding bias and leading questions

Session 4: Root Cause Analysis (RCA)

- 5-Whys
- Fishbone/Ishikawa diagrams
- Fault tree analysis
- Human factors and organisational failures

Session 5: Case Study Workshop #2

- Analyse a mock incident
- Identify immediate, underlying & root causes
- Prepare a preliminary incident analysis

Day 3

Reporting, Prevention Measures & Practical Assessment

Session 1: Report Writing Standards

- Structure of an electrical incident report
- Evidence presentation
- Photography & diagrams
- Crafting clear conclusions & actionable recommendations
- Linking findings to legal duties and standards

Session 2: Developing Corrective & Preventive Actions

- Engineering controls
- Procedural updates
- Competency and training requirements
- PPE & arc flash mitigation
- Incident energy identification and recognition
- Improving inspection & maintenance regimes

Session 3: Organisational Learning

- Sharing lessons learned
 - Updating risk assessments
 - Monitoring and reviewing controls
- Full Practical Investigation Exercise

Session 4: Participants conduct a full mock investigation:

- Scene examination
- Evidence collection
- Witness interviews
- Root cause analysis
- Writing and presenting a full report to the class

Session 5: Assessment & Certification

- Written test
- Group presentation
- Review session & Q&A

Session 6: Deliverables Included

- Course workbook
- Templates: Incident report, interview forms, inspection checklists
- Root cause analysis worksheets
- Completion certificate (competence-based)

Programme Schedule

08:30 am - 09:00 am	Registration & Coffee Break
09:00 am - 11:00 am	Course
11:00 am - 11:30 am	Networking & Coffee Break
11:30 am - 01:00 pm	Course
01:00 pm - 02:00 pm	Networking & Luncheon
02:00 pm - 03:00 pm	Course
03:00 pm - 03:30 pm	Networking Break
03:30 pm - 05:00 pm	Course

Who Should Attend?

- Employers
- Supervisors
- Safety Representatives
- Safety Officers
- Investigators
- Supervisors and Managers
- HSE Professionals
- Incident Response Teams

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Registration Form

Please fill & sign below form & send us on
training@indulead.com

Delegate 1

Name : _____
Job title: _____
Email: _____
Mobile: _____

Delegate 2

Name : _____
Job title: _____
Email: _____
Mobile: _____

Delegate 3

Name : _____
Job title: _____
Email: _____
Mobile: _____

Delegate 4

Name : _____
Job title: _____
Email: _____
Mobile: _____

Delegate 5

Name : _____
Job title: _____
Email: _____
Mobile: _____

Note: In case of 6 or more nominations make a duplicate of this form & fill in the details.

ORGANIZATION DETAILS:

Company : _____
Address: (to be used on invoice): _____

Telephone: _____
Country: _____

AUTHORIZED BY:

Signature: _____
Name: _____
JobTitle: _____
Email: _____
Date: _____

PAYMENT DETAILS:

Credit Card Holder's Details - To send Payment Link

First Name: _____
Last Name: _____
Email: _____
Country: _____

Event Code: IL-EII-015

Course Fee

Registration Fees:

- Book 1 delegate Pay USD 3,295/delegate
- Book 2 or 4 delegates Pay USD 2,895/delegate
- Book 5 or more Pay USD 2,795/delegate

(All pricing excludes all taxes)

Payment Mode:

- Payments will be made by **Credit Card** or by **Bank transfer**, an Invoice will be sent soon after we receive the signed & filled registration form.
- Payment is required within **5 working days** after the receipt of the invoice.
- Payment must be received in full prior to the Course Origination.

Terms & Conditions:

- 1) Fee Includes (For Face 2 Face Training): the course fee covers all course material, lunch & refreshments. Please note that hotel accommodation is not included in the course fee.
- 2) Fee Includes (For Virtual Training): the course fee covers the live course session & the course material soft copies along with Certificates of Attendance.
- 3) Payment terms: Payments are required within 5 working days from the date of receipt of an invoice; all payments should be transferred by Credit Card/bank transfer to the Indulead International account. A receipt will be issued as payment is received.
- 4) Cancellation /Substitution Policy: Cancellation is only acceptable if submitted to us by email & will be subject to charges, cancellation received 60 days prior to the event 25% of the training fee will be charged, 30 Days prior to the event 50% of the training fee will be charged, 15 days prior to the event 75% of the training fee will be charged, 7 days prior to the event 100 % of the training fee will be charged. Substitution is the best option to avoid cancellation, as the cancellation is required in writing via email likewise Substitution is also required by email with complete details of the substituted delegates (Name, Position, Email & Mobile).
- 5) In the case of No Show, clients cannot claim any refund, & are not entitled to claim the Credit Voucher.
- 6) Cancellation by a paid client; does not subject to any cancellation charges, Indulead International will either accept the substitution or will provide a Credit Voucher of the Invoice amount which can be utilized in any of our future training, with validity up to 6 months.
- 7) Every possible effort is made to incorporate the event as it campaigns, however, due to any unforeseen circumstances Indulead International reserves the right to change the venue, location, and trainer. Also due to unforeseen circumstances, the event may be canceled or postponed, in this case, the paid delegate(s) Indulead International will process & refund the full amount, less the bank/service charges up to 5 % or less.
- 8) While all topics shown in this brochure will be covered in the course, the facilitator/instructor reserves the right to restructure and delivers them in a different order or sequence.
- 6) The client is considered aware of all the above terms and conditions, as they sign on this registration form & Indulead International will not be responsible for any expectation or monetary loss as indicated above.