

Electrical Equipment in Hazardous Areas – Installation & Maintenance

A fast, practical overview of hazardous area fundamentals, Ex protection methods, and compliant installation and inspection practices.

D A T E S

17th - 18th
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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Course Overview

This course provides a comprehensive understanding of Installation and Maintenance of Electrical Equipment within an hazardous Area (EEHA) Our instructor will also cover all aspects of reporting, repairing, maintaining, and testing equipment in hazardous areas.

Participants will learn how to prepare for undertaking work related to electrical equipment, how to enter a classified hazardous area safely. The reasoning and methodology to understand, determine and implement to the explosion protection requirements to meet a specified classified hazard. Implement proactive maintenance strategies, and apply industry best practices to ensure sustainable asset performance. Through real world case studies and interactive exercises, attendees will develop skills to improve decision making and ensure safety is applied to all exercise and work carried out. This course provides recognised competencies for working with electrical equipment for hazardous areas (EEHA).

Key Learning Outcomes

By the end of this training, participants will be able to:

- **Understand the principles of EEHA**, preparation, entering classified hazardous area safely to undertake work related to electrical equipment
- **Conduct detailed inspection** of electrical installations for hazardous areas
- **Determine the explosion protection requirements** to meet a specified classified hazardous area
- **Install explosion protected equipment** and associated apparatus and wiring systems
- **Maintain equipment** associated with hazardous areas
- **Plan electrical installations** for hazardous areas
- **Conduct visual and close inspection** of electrical installations for hazardous areas

Why You Should Attend?

Through the blended combination of theory and task-based activities, participants will gain the knowledge and skills to report, inspect, install, maintain and attend breakdowns of electrical equipment in a potential explosive environment. Attending an EEHA (Electrical Equipment in Hazardous Areas) course is highly worthwhile especially if you work around industrial sites, plants, or any environment where flammable gases, vapours, or dusts may be present. Here are the key reasons why it's important:

Legal & Compliance Requirements:

Many industries must comply with standards such as AS/NZS 60079 and other hazardous area regulations.

Improved Safety for You and Your Team:

Hazardous areas can cause explosions if electrical equipment is incorrectly selected, installed, or maintained. EEHA training teaches you how to:

- Identify hazardous zones
 - Select appropriate equipment
 - Perform correct installation and maintenance
 - Recognise and avoid ignition sources
- This significantly reduces workplace risk.

Expands Your Technical Knowledge:

You'll gain skills in:

- Ex d / Ex e / Ex i / Ex t protection techniques
- Gas vs dust hazardous classifications
- Equipment certification and marking
- Inspection procedures and reporting

Reduces Downtime & Improves Asset Reliability:

Properly installed and maintained hazardous area equipment lasts longer and fails less, which means fewer breakdowns, call-outs, and plant disruptions.

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, HVSA 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

Fundamentals, Equipment, and Installation

Session 1: Introduction to Hazardous Areas

- What is a hazardous area?
- Gas vs vapour vs dust hazards
- Ignition sources
- Why EEHA competency is required
- Overview of standards (AS/NZS / IEC 60079)

Session 2: Zone & Classification Concepts

- Zone 0, 1, 2 (gas) and 20, 21, 22 (dust)
- Gas groups (IIA, IIB, IIC)
- Temperature classes (T1-T6)
- Reading hazardous area drawings
- Area classification reports (basic overview)

Session 3: Explosion Protection Techniques

- Ex d – Flameproof
- Ex e – Increased Safety
- Ex i – Intrinsic Safety
- Ex n / Ex t / Ex p
- When and where each is used
- Certification and equipment markings (Ex labels)

Session 4: Equipment Selection

- Matching equipment to the zone
- Reading certification plates
- Selecting cables, glands, enclosures
- Temperature ratings and IP ratings
- Common selection mistakes
- Practical examples of equipment choice

Day 2

Analysis, Reporting & Corrective Actions

Session 1: Installation Requirements

- AS/NZS 60079.14 installation rules
- Cable entries and glanding
- Barrier glands vs standard Ex e glands
- Earthing and bonding
- Conduit, sealing, and mechanical protection
- Practical examples of compliant vs non-compliant installs

Session 2: Maintenance & Repairs

- AS/NZS 60079.17 requirements
- Flamepath maintenance (for Ex d)
- Dust ingress protection checks (Ex t)
- Torque checks, corrosion, documentation
- What not to do (common faults)

Session 3: Inspection & Fault Finding

- Inspection types: Visual, Close, Detailed
- Frequency and schedules
- How to identify faults
- Using inspection sheets and checklists
- Practical exercise (fault-finding on sample equipment/photos)

Session 4: Documentation, Dossier & Assessment

- Equipment records & logs
- Hazardous area dossier contents
- Tagging systems and traceability
- Completing installation & inspection paperwork
- Final knowledge check / assessment
- Course wrap-up and Q&A

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?

- Electrical Engineers who work in and around hazardous zones
- Asset Managers & Plant Managers in Industrial, Mining, Oil & Gas
- Maintenance Planners & Supervisors to enhance compliance knowledge
- Operations & Safety Engineers
- Health & Safety Duty Holders for Competency Assessments

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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: _____
Job Title: _____
Email: _____
Date: _____

PAYMENT DETAILS:

Credit Card Holder's Details - To send Payment Link

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

Event Code: **IL-EEHA-010**

Course Fee

Registration Fees:

- Book 1 delegate Pay USD 1,295/delegate
- Book 2 or 4 delegates Pay USD 995/delegate
- Book 5 or more Pay USD 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.