



EARTHING & LIGHTNING PROTECTION

ensuring proper earthing & lightning protection systems at the workplace

HRDF

www.zohlgroup.com

COURSE CODE: T-ENGR-03

LEVEL: Basic to Intermediate

LANGUAGE: Bahasa & English

OVERVIEW

This course is aimed at giving the fundamental understanding of Lightning Protection System, design concept and practice of Lightning Protection System, testing techniques and standard practice of earthing system.

OBJECTIVES

By the end of this course participants will be able to:

- explain the fundamentals of lightning
- describe the types of lightning protection systems
- verify the problems of lightning related damages via direct strikes
- verify the problems of lightning induced surges to your facilities
- explain the concept and fundamentals of grounding systems
- perform the basic maintenance on grounding systems
- perform preventive maintenance on grounding systems

COURSE DURATION

2 days (9am—5pm).

Tea Breaks: 10:30am & 3:30pm.

Lunch: 1:00pm-2:00pm

Note: Please contact our office for Training Date or visit our website for details (www.zohlgroup.com)

METHODOLOGY

Lecture, Demo, Group Discussion, Exercises, and Case Studies.

TARGET AUDIENCE

This program is suitable for Engineers, Technical Executives, Technical Officers, Technicians, Site Supervisors and anyone who is responsible for site/office safety & HSE.

LOCATION

Mindset Discovery Center™@ZOHL, Bandar Sri Damansara, Kuala Lumpur or Client's Preferred Location or any selected hotel to be determined later.



COURSE CONTENT

DAY ONE

- Codes & Standards in Malaysia & Other related standards
- Objectives of Earthing
- Principles of Earthing: Background, Earthing Sub-systems, Integrated and Isolated Earth Planes
- Purpose, Principles, & Practices of the following:
 - Subsystem
 - Lightning Protection
 - Fault Protection (Protective Earth)
 - Signal Earth (Signal Reference)
 - Earth Array
- Method applicable in Earthing systems:
 - Connections and connectors
 - Exothermic welding
 - Compression
 - Mechanical
 - Connection of Lugs
 - Conductors
 - Bus bars
 - Insulators
 - Jointing Compound
 - Mechanical Hardware; Earth Rods; Use of Ground Enhancement materials
 - Placement of earth Rods; Installation of Copper Tape; Bonding
 - Inspection Chamber
 - Master Test Chamber
- Acceptance Criteria: Workmanship; Visual Inspection; Earth Resistance Test; Insulation Test
- Maintenance: Annual Inspection; Measurement of Earth Current; Measurement of AC earth Leakage

DAY TWO

- How surge voltage transients occurs: The causes; Galvanic; Inductive; Capacitive
- Effects of Surge Voltage Transients
- Protective Measures Against Surge Voltage
- Comprehensive Lightning Protection Concept:
 - 3-stage protection concept for power supply
 - Measurement and control circuits
 - Data and Telecommunication
- Codes and Standards related to Lightning & Surge: Lightning & Surge Protection

Customized In-House Training Program is available in the following areas:

Administrative Skills | Career Development | Human Resources | Personal Development | Sales & Marketing | Leadership & Management | Workplace Essentials | Entrepreneurship | Soft Skills | Engineering | Telecoms | IT

CALL US FOR DETAILS or VISIT OUR WEBSITE AT WWW.ZOHLGROUP.COM



Sebarang pertanyaan sila hubungi Cik Niesa

ZOHL Consultancy Sdn Bhd (332967-D)(GST ID:000327831552)

M2-15-02, Level 15, 8trium Tower 2, Jalan Cempaka SD 12/5

Bandar Sri Damansara, 52200 Kuala Lumpur

T: 03.6279.9276 F: 03.6279.0663 HP: 013.206.1038 E: training@zohlgroup.com



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COURSE FEE

RM1,200

(Fee inclusive of Course Material, Attendance Certificate, and Meals)

CERTIFICATE

Participants will be issued a Certificate of Attendance/Accomplishment upon successful completion of this training program. Full attendance is a pre-requisite.

HRDF CLAIMABLE

Yes. SBL Khas. If your company contributes to HRDF Fund

REGISTRATION METHOD

1. **Online:** http://zohlgroup.com/hrdf_registration/ **OR**
2. Download this brochure at: <http://zohlgroup.com/hrdf-brochures/> and fill up the required information. Then please fax to: 03.6279.0663
3. Or contact our office at: 03.6279 9276 / 013.398.1038

FACILITATOR

Sathy Vel Naidu - Sathy has more than 25 years of experience in the Mechanical and Electrical (M&E) industry.



Over the span of his career he has gained significant knowledge in project management, electrical systems troubleshooting & maintenance, and systems design & engineering. In addition to managing projects he has also started sharing his knowledge through training services under ZOHL

Technical Programs.

Education:

- Electrical Chargeman License
- Certificate in Westinghouse Electrical Systems
- Power Systems Auditor for Procter & Gamble
- Radiation Safety Training for Honeywell TDC 3000

Experience:

- Electrical Technician for Hitachi Electronics Devices Singapore
- Testing & commissioning supervisor for Toyo Engineering
- Asst Engineer for FPG Oleochemicals Sdn Bhd
- Maintenance Manager FPG Oleochemicals sdn Bhd
- Engineering Director at Pakat Perkasa Sdn Bhd
- Lightning & Earthing Protection Systems Trainer for Celcom.
- Electrical Trainer for Leighton Offshore.
- Technical Trainer @ZOHL

*Note: Trainer availability is subject to change

REGISTRATION FORM

Participant#1: _____

Position: _____

IC No: _____

Participant#2: _____

Position: _____

IC No: _____

Training Date: _____

Organization: _____

Address: _____

Contact Person: _____

Position: _____

Tel: _____

Fax: _____

Email: _____

PAYMENT

CASH: RM _____ **OR**

CHEQUE No: _____

Please fax your bank-in slip to 03.6279.0663 or scan your bank-in slip and email to training@zohlgroup.com

*Please make your cheque payable to:

ZOHL Consultancy Sdn Bhd



Account No:
514392303373

Signature & Company Stamp

Note:

- Date & venue of seminar subject to changes
- Payment must be made 7 days before the training date
- Registration cancelled 7 days prior to the event is subject to RM100 service charge per participant
- No refunds for notice received less than 7 days prior to the event. A substitution may be made at any time at no extra charge.
- Program content may change subject to revision by our consultants from time to time.
- Full fee is required with your registration. 5% Group discount is available - min 3 pax.

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