Effective Human Intervention
LEADERS IN TRAINING

Recognised for Continuing Professional Development (CPD) by SAAMA in accordance with ECSA guidelines

SAAMA

ELIGIBLE FOR 2 CPD POINTS

THE NEW SANS 10142-1

INCLUDING EDITION 3 OF THE WIRING CODE

SANS10142-1 All new Code for the Wiring of Premises and the OHSACT 85/1993 and Related Regulations

SANS 10142 part 1 Ed 3, and including the responsibilities required by all concerned terms of the occupational Health and Safety Act 85 of 1993 and the general requirements of the certificate of compliance for any electrical installation up to 1000 volts

- **Delegates are encouraged to bring their own codes, Certificates of Compliance and calculators**

EHI has been accredited by MERSETA Accreditation No: 17-QA/ACC/0603/11 B-BBEE Level 2

SANS10142-1 (EDITION 3) FOR WIRING OF PREMISES AND THE OHSACT 85/1993 AND RELATED REGULATIONS

COURSE SYNOPSIS

Some individuals and Companies still hold the outdated perception that they might or should be exempted from compliance with the SANS 10142-1 code for the wiring of premises.
SANS 10142-1 is incorporated into law through reference in the Electrical Installation Regulations of the OHSACT.

This act states that "no person shall connect or permit the connection of any completed or partially completed electrical installation to the electricity supply unless it has been inspected and tested by a registered person and a certificate of compliance for that electrical installation has been issued. This workshop would look at the fundamental and installation requirements under the code and how to get to the stage where an electrical installation can be inspected and tested and a COC issued. It will include solar systems from the solar code and medical locations including certificates of compliance.

WHO SHOULD ATTEND?

The workshop is ideal for Engineering Professionals who have interest in electricity safety

- ✓ Plant Engineers and Managers
- ✓ Electrical Engineers and Technicians
- ✓ All electrical practitioners, electricians, millwrights, contractors
- ✓ Engineering Managers
- ✓ Maintenance Engineers
- ✓ Instrumentation Engineers
- ✓ OHS Managers
- ✓ Workplace Safety Professionals
- ✓ Consultants
- ✓ Technicians and Supervisors
- ✓ Foreman, Superintendents and Artisans
- ✓ Electrical Contractors
- ✓ Solar installers

CUSTOMISED VIRTUAL TRAINING AND/OR IN-HOUSE TRAINING

If you wish to organize a Virtual Instructor Led Training session or In-House session for your organization, we will custom design a session that will help you achieve your desired learning goal. The main advantage of custom designed VILT, in addition to being significantly cost effective, is that they address topics specifically related to the needs of your organization. **To discuss the possibility of designing and conducting such a session or In-House training session, contact us on 021 979 5891 or callie@ehiafrica.co.za for a comprehensive quotation.**

Confirm

REGISTRATION CONFIRMATION

Complete your registration form. Receive your invite and confirm your VILT session by clicking on the link in the email invite. Click "Add to calendar" to ensure you do not miss the training course.

Alternatively, a signed In-house quotation will secure your group training session, followed by an invoice and date confirmation.

BENEFITS INCLUDE:

- Participation in an interactive live web-based video workshop
- Learn from interaction with other appointee's in industry
- Comprehensive course documentation
- Certificate of attendance
- 2 CPD Points

Understand the implication of these codes as applied to the Electrical Environment including:

- The connections to electrically powered machinery
- The design, construction, and repair of electrical installations
- The inspection and handling of disputes regarding electrical installations, the AIA concepts
- The registered person, contractors and other electrical practitioners
- The supervision of electrical installations
- The certificate of compliance and test reports
- Solar systems
- Medical locations
- Alternate supplies
- Earthing arrangements

Continuing Professional Development (CPD) refers to continuing education and training. **CPD** also refers to the systematic maintenance, improvement and broadening of knowledge and skills and the development of the necessary personal qualities for the execution of professional duties throughout a person's career. It is the learning and development that takes place after completion of educational studies and by which registered persons maintain and develop competencies to continue to perform their roles efficiently through further training and experiences. **ECSA is recognised by SAQA as a Professional Body ID: 623. CPD registered courses can be submitted on your WSP.** EHI's courses are accredited through **SAAMA** for approval of CPD activities which will automatically be accepted by **ECSA**.

This is a short learning programme, and you will not receive credits towards formal learning registered on the SAQA database. Most short learning programmes are **aligned** to a unit standard.

SANS10142-1 (EDITION 3) FOR WIRING OF PREMISES AND THE OHSACT 85/1993 AND RELATED REGULATIONS

DAY 1

MODULE 1

Session 1

Introduction

- Occupational Health and Safety Act – Background to the working environment
- The content and use of company regulations
- How the regulations apply when work must be carried out on apparatus
- Responsibilities and duties of authorised persons
- Safety conditions
  - Safety of personnel
  - Safety of equipment
  - Safety of plant
- Electrical safety – how do we achieve it?
  - Electrical switchgear safe operating
- Electrical installations include many components such as switchgear and control gear and cables

Session 2

Legislation such as Electrical Installation Regulations (EIR, EMR)

- Some definitions
- Responsibility
- Authorized Inspection Authority
- Design and Construction (Section 5)
- Contractor
- Certificate of Compliance and new test reports
- Registered Electrician

Session 3

Background to Electrical Concepts

- Electrical circuits including series and parallel
- Electrical protection components selection and applications
- Electrical components found in any electrical installation
- Specific earthing requirements
- Introduction to the associated codes

Inspection Documents

- Certificate of compliance
- The Various Test reports
  - Single phase, 3 phases
  - Hazardous area
  - Industrial and commercial
  - Solar

ABOUT YOUR FACILITATOR

Ian Mee *(CEM, Pr. Tech.Eng. Pr.Cert.Eng. SM-ICMEE-SA, M SAIEE, M-IPET MIE 00009)*

Ian Mee is registered as a Professional Technologist, Professional Certificated Electrical and Mechanical Engineer and registered as a Master Installation Electrician. He has 50 years of Industrial experience in Electrical, Mechanical and Process Engineering which included chemical, rubber, paper, sugar, shipping and food industries. With over 20 years in the chemical and allied Industrial environment at senior management levels. The last 20 years running a consulting practice. Ian Mee is a registered Assessor for EWSETA and is a SANAS accredited Authorised inspection Body and is recognised by Department of Labour as an AIA (CI 014)

MODULE 2

Session 1

Introduction to SANS 10142-1
Specific electrical requirements from the code:

- What is covered by this code?
- Safety, Basic provisions, Characteristics of the supply,
- Installations and component selection
- Special installations
- Introduction to safety earthing concepts
- Earthing requirements
- Specific tests required for compliance

Session 2

- SANS 10142 - 1 – Edition 3 Wiring of Premises
- Introduction to the wiring code and its application between point of control and point of consumption
- Specific Application of the code for the following installations concepts:
- definitions, component compliance and safety
- requirements
- Requirements for the general installation wiring
- and selection of components, including all the
- tables for cables (for calculations)
- Special installations including swimming pools, and medical locations
- Inspection and testing including the function of
- various instruments required
- Annexure –The general concepts outlined in the annexures (volt drop and cable selection)
- A general guideline included for assistance in volt drop and fault calculation

SANS10142-1 (EDITION 3) FOR WIRING OF PREMISES AND THE OHSACT 85/1993 AND RELATED REGULATIONS

Group activity in doing hand calculation of cable selection, volt drop and fault handling, including the application of a simple computer programme that will be given to the delegates.

DAY 2

MODULE 3
Session 1

- The Certificate of Compliance, Test reports including changes and applications
- Details of the Certificate of Compliance and Test Reports
- Additional requirements
- Interpretation of the Certificate of compliance

Additional Certificates required for

- Residential
- Industrial
- Medical locations
- Hazardous areas
- Solar
- Other

Information

- Calculations
- Pit falls
- Instruments
- Measurements

Major components in an installation

- Supply conditions
- Transformer
- Meter kiosk
- Cable
- Consumer

Residential / Industrial / Commercial / State Owned

- Consumer cable
- Point of supply
- Point of control
- Point of consumption
- Point of outlet

Some problem areas:

- Fixed appliances
- Arms reach
- Mixed circuits and loading
- Ceiling fans and control systems

Alternative Supplies (Generators, UPS, Solar)
PSCC

- Loop impedance measurement and interpreting results
- Bonding conductor and measurements
- Earth continuity conductor measurements

MODULE 4

Session 1

Changes from Edition 2
Sections from the Code

- Introduction
- Normative references
- Definitions
- Compliance
- Fundamentals
- Installation
- Special installations
- Medical locations
- Alternative supplies
- Test and measurement
- Certificates of compliance
- General concepts from the annexures

Session 2

- General discussion on all the Codes required for an Electrical Installation
- Industrial, Commercial, Medical, Solar and alternative Supplies
- Industrial Earthing Systems
- Solar Earthing Systems