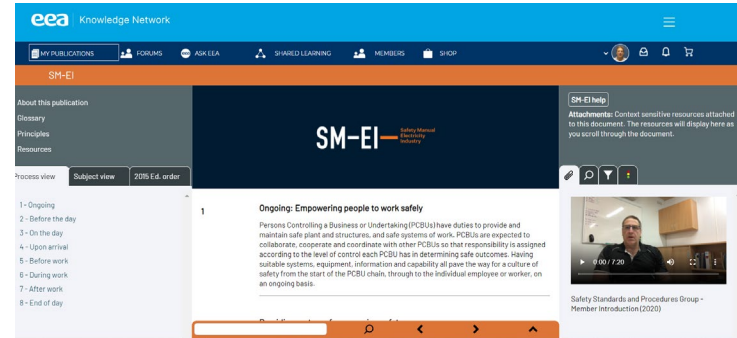
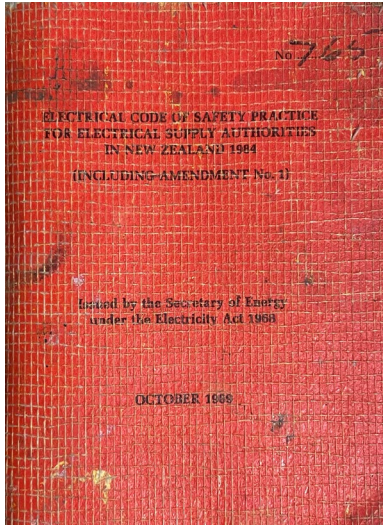


SM-EI Overview and the Knowledge Network

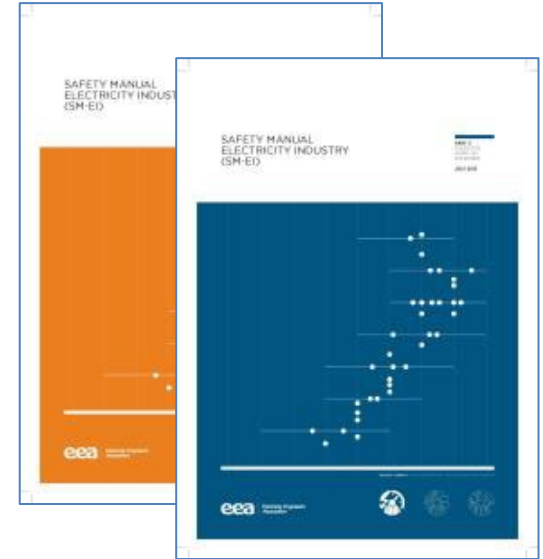
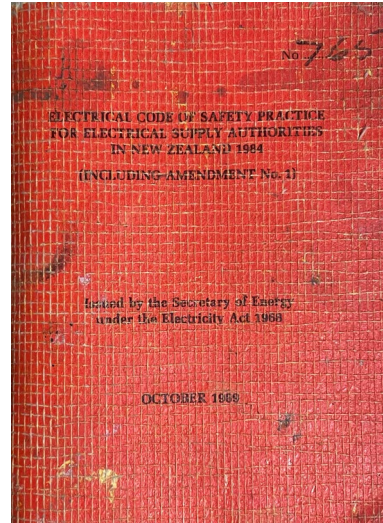


SM-EI



Fundamentally the rules haven't changed

- 5 yearly
- Legislation changes
- Accidents / Incidents
- Clarification
- Learnings



But what did change from old to new



One entity – after 266 exact duplications removed



330 new lines – rules, principles, definitions, resources



1604 lines removed – from merging and simplifying



1303 redrafted rules – plus new introductory content

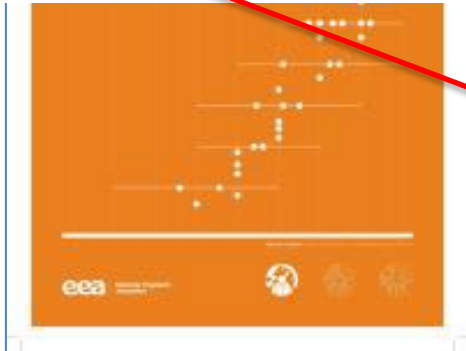


Updates to language from 2015



1.108 SAFETY OPERATIONAL MANAGEMENT SYSTEMS

Employers should develop a Safety Operational Management System to provide for the management of health and safety for their employees.



RM 1.1021
1.108

Persons Conducting a Business or Undertaking (PCBU) shall develop and maintain Health and Safety Management Systems to manage the health and safety of workers under their control.

SM-EI

Rules in this section apply to: *Asset Maintenance, Operational Control, Operational Policy,*

About this publication
Glossary
Principles
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Process view | Subject view | 2015 Ed. order

1- Ongoing
1.1- Provide systems
RM. Work management
1.2- Provide equipment
1.3- Provide instruction
1.4- Provide assessment
2- Before the day
3- On the day
4- Upon arrival
5- Before work
6- During work
7- After work

RM 1.1011
1.108
Persons Conducting a Business or Undertaking (PCBU) in the electricity supply industry shall collaborate, cooperate and coordinate with one another where they have overlapping duties.

RM 1.1021
1.108
Persons Conducting a Business or Undertaking (PCBU) shall develop and maintain Health and Safety Management Systems to manage the health and safety of workers under their control.

RM 1.1031
1.108
The Health and Safety Management System shall meet statutory requirements, and should incorporate any additional local requirements where these exist.

RM 1.1041
1.108
The Health and Safety Management System should be fit-for-purpose and integrated with other management systems. The size, sophistication and detail of the system will reflect the organisation's risk profile. High risk industries, such as those that work on or near electricity assets, require more substantial systems.

RM 1.1051
1.108
The Health and Safety Management System shall include mechanisms for workers to participate in identifying hazards, and eliminating and/or minimising risks to health and safety.

RM 1.1061
1.108
The Health and Safety Management System shall support managing identified hazards. Risks to health and safety shall be eliminated so far as is reasonably practicable. If a risk cannot be eliminated, then it must be minimised so far as is reasonably practicable.

SM-EI help
Attachments: Context sensitive resources attached to this document. The resources will display here as you scroll through the document.

RM Work management
RM 1.1131 (1.108)
Persons Conducting a Business or Undertaking (PCBU) shall comply with the health and safety duties in Part 2 of:
- Health and Safety at Work Act (2016)

RM 1.1141 (1.108)
Persons Conducting a Business or Undertaking (PCBU) shall comply with:
- Health and Safety at Work (General Risk and Workplace Management) Regulations (2016)
- Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations (2016)



Update to rules to reflect new requirements



SECTION 4: RULES COMMON TO ALL ACCESS AND TEST PERMITS

BACKGROUND

- a. An access or test permit is required before work commences on any equipment, or within the relevant minimum approach distance of electrical equipment, that needs to be isolated, as provided in rule 3.402. (Relevant minimum approach distance is the distance that would apply if the equipment was live).
- b. For electrical equipment, access and test permits apply to HV equipment only, except as provided in rule 3.402 b.



SM-EI

Find: Enter a key word to search the document. Click on a link to go to the section where the key word is found.

EE. Electrical hazards

EE 2.1011 3.402 An access permit or test permit shall be required for work on, or within, the minimum approach distance of:
- In-service equipment or in-situ backup equipment
- equipment being installed or commissioned
- equipment being de-commissioned or dismantled.

EE 2.1021 1.251 A test permit shall be applied where the work requires operational checks or the application of test voltages.

EE 2.1031 Where work requires safety measures to be applied to equipment owned and controlled by a...

EE. Electrical hazards

EE 2.1011 3.402 An access permit or test permit shall be required for work on, or within, the minimum approach distance of:
- In-service equipment or in-situ backup equipment
- equipment being installed or commissioned
- equipment being de-commissioned or dismantled.

EE 2.1011 The issuing of any specific access permit or test permit, or the issuing of a live line permit, shall

3.402



Links to resources

SM-EI

Rules in this section apply to: *Asset Maintenance, Operational Control, Operations/Policy*

About this publication
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Process view | Subject view | 2015 Ed. order

1 - Ongoing
1.1 - Provide systems
RM. Work management
1.2 - Provide equipment
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1.4 - Provide assessment
2 - Before the day
3 - On the day
4 - Upon arrival
5 - Before work
6 - During work
7 - After work
8 - End of day

RM. Work management

RM 1.1011 7.108	Persons Conducting a Business or Undertaking (PCBU) in the electricity supply industry shall collaborate, cooperate and coordinate with one another where they have overlapping duties.
RM 1.1021 7.108	Persons Conducting a Business or Undertaking (PCBU) shall develop and maintain Health and Safety Management Systems to manage the health and safety of workers under their control.
RM 1.1031 7.108	The Health and Safety Management System shall meet statutory requirements, and should incorporate any additional local requirements where these exist.
RM 1.1041 7.108	The Health and Safety Management System should be fit-for-purpose and integrated with other management systems. The size, sophistication and detail of the system will reflect the organisation's risk profile. High risk industries, such as those that work on or near electricity assets, require more substantial systems.
RM 1.1051 7.102	The Health and Safety Management System shall include mechanisms for workers to participate in identifying hazards, and eliminating and/or minimising risks to health and safety.
RM 1.1081 7.102	The Health and Safety Management System shall support managing identified hazards. Risks to health and safety shall be eliminated so far as is reasonably practicable. If a risk cannot be eliminated, then it must be minimised so far as is reasonably practicable.
RM 1.1071	The Health and Safety Management System shall support hazard identification in a

Attachments: Context sensitive resources attached to this document. The resources will display here as you scroll through the document.

SH-EI help

RM 1.1081
7.102
Persons Conducting a Business or Undertaking (PCBU) shall comply with the health and safety duties in Part 2 of:
- Health and Safety at Work Act (2015)

RM 1.1041 (7.108)
Persons Conducting a Business or Undertaking (PCBU) shall comply with:
- Health and Safety at Work (General Risk and Workplace Management) Regulations (2016)
- Health and Safety at Work (Worker Engagement, Participation, and Representation) Regulations (2016)

RM 1.1061 (7.108)
Health and Safety Management Systems should be guided by:



Identified 138 distinct resources – for resource index

By sections | View whole (916KB) | Versions and amendments | Print/Download PDF (1.1MB)

Contents | Previous section | Next section | Tag section | Remove | Previous hit | Next hit

Reprint as at 1 December 2020

Health and Safety at Work Act 2015
Public Act 2015 No 70
Date of assent 4 September 2015
Commencement see section 2

Note
Changes authorised by subpart 2 of Part 2 of the Legislation Act 2012 have been made in this official reprint.
Note 4 at the end of this reprint provides a list of the amendments incorporated.

This Act is administered by the Ministry of Business, Innovation and Employment



Views

SM-EI

REQUEST PRINTABLE PDF ORDER HARDCOPY EDITION

Management Supervisor (STMS).

About this publication
Glossary
Principles
Resources

Process view Subject view 2015 Ed., order

R - Readiness
E - Environment
S - Security
P - Positions
PC - Confined spaces
PH - Work at height
PE - Excavation work
PW - Immersive water
E - Energy
C - Chemicals
T - Technology

P **Managing position hazards**

The nature of electricity means that supply system components are positioned to make access difficult for safety reasons. Maintenance and inspection of these components can require working at unnatural positions, such as at height, inside structures, underground or under water. The location depends on how the equipment fits into the wider system and the network development strategies of individual asset owners. A single working position may carry multiple position hazards (e.g. working inside a confined space at height above water). The hazards introduced by unnatural working positions can be complex, and therefore require multiple controls to minimise risks to safety.

PC **Managing the risks of confined space work**

A confined space is only created when a worker is required to enter a defined area that is not naturally designed for occupancy. Entry and exit may be difficult, and the area may contain harmful contaminants and lower levels of breathable air. Any lack of structural integrity might also result in collapse and risk of engulfment - as may occur with a temporary excavation. Sometimes, the work to be carried out creates a confined space (e.g. hot work). Because a confined space can present a multitude of risks it is treated as a separate subject requiring careful selection of controls.

Rules in this section apply to: *Competency Management Systems, Industrial enclosures, Industrial materials, Underground services, Work Management Systems.*

1.3. Provide instruction

PC 1.3011 Workers who are required to work in confined spaces shall be suitably trained in confined space
2.1202 procedures, including rescue techniques.

1.4. Provide assessment

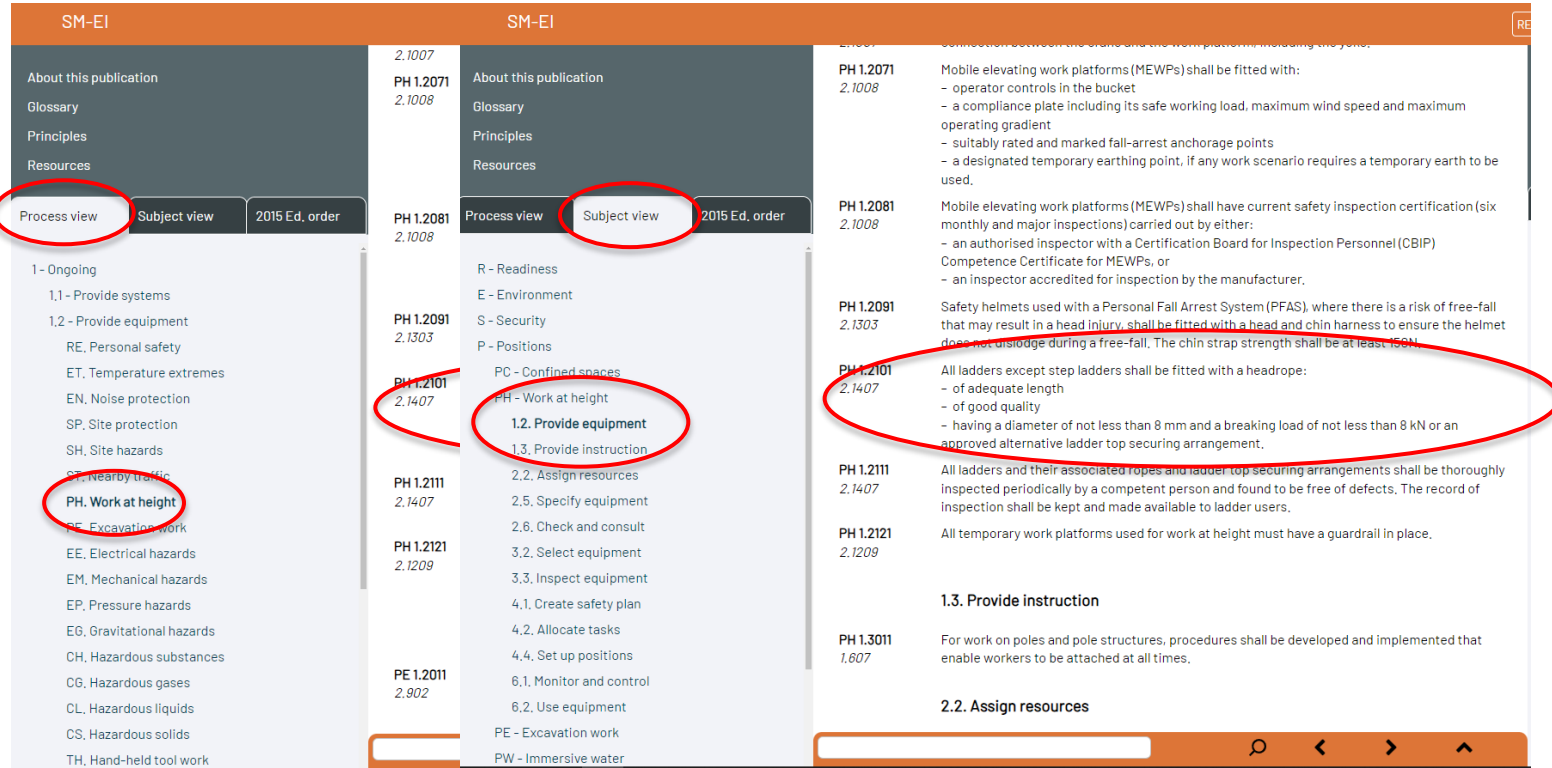
SM-EI help

Attachments: Context sensitive resources attached to this document. The resources will display here as you scroll through the document.

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Views – finding information using the views option



The screenshot displays a web application interface for finding information. The interface is divided into three main sections: a navigation menu on the left, a central list of findings, and a detailed view of a selected finding on the right.

Navigation Menu (Left): The menu includes options like "About this publication", "Glossary", "Principles", and "Resources". Below these are three view options: "Process view", "Subject view", and "2015 Ed. order". The "Process view" and "Subject view" buttons are circled in red.

Central List of Findings: This section lists various findings with their IDs and dates. The finding "PH. Work at height" is circled in red. Below it, the sub-section "1.2. Provide equipment" is also circled in red.

Detailed View (Right): This section shows the full text of a selected finding. The finding "PH 1.2101 2.1407" is circled in red. The text describes requirements for ladders, including headrope specifications. A red oval highlights the following text: "All ladders except step ladders shall be fitted with a headrope: - of adequate length - of good quality - having a diameter of not less than 8 mm and a breaking load of not less than 8 kN or an approved alternative ladder top securing arrangement."



Views – finding information – using the search function

The screenshot displays the SM-EI search interface. The top navigation bar includes 'SM-EI', 'REQUEST PRINTABLE PDF', and 'ORDER HARDCOPY EDITION'. The left sidebar contains navigation options: 'About this publication', 'Glossary', 'Principles', 'Resources', 'Process view', 'Subject view', and '2015 Ed. order'. A list of categories is shown, with 'PH - Work at height' selected. The main content area lists search results for 'ladder', including sections like '1.2. Provide equipment', '1.3. Provide instruction', and '2.2. Assign resources'. A search bar at the bottom of the page contains the text 'ladder'. On the right side, a search results panel is visible, showing 'Exact matches found in:' and 'Partial matches found in:' sections. The search results panel is circled in red, and the search bar at the bottom is also circled in red.

SM-EI

REQUEST PRINTABLE PDF ORDER HARDCOPY EDITION

SM-EI help

Find: Enter a key word to search the document. Click on a link to go to the section where the key word is found.

Process view Subject view 2015 Ed. order

R - Readiness
E - Environment
S - Security
P - Positions
PC - Confined spaces
PH - Work at height
1.2. Provide equipment
1.3. Provide instruction
2.2. Assign resources
2.5. Specify equipment
2.6. Check and consult
3.2. Select equipment
3.3. Inspect equipment
4.1. Create safety plan
4.2. Allocate tasks
4.4. Set up positions
6.1. Monitor and control
6.2. Use equipment
PE - Excavation work
PW - Immersive water

2.1008 operator controls in the bucket
- a compliance plate including its safe working load, maximum wind speed and maximum operating gradient
- suitably rated and marked fall-arrest anchorage points
- a designated temporary earthing point, if any work scenario requires a temporary earth to be used.

PH 1.2081 2.1008 Mobile elevating work platforms (MEWPs) shall have current safety inspection certification (six monthly and major inspections) carried out by either:
- an authorised Inspector with a Certification Board for Inspection Personnel (CBIP) Competence Certificate for MEWPs, or
- an inspector accredited for inspection by the manufacturer.

PH 1.2091 2.1303 Safety helmets used with a Personal Fall Arrest System (PFAS), where there is a risk of free-fall that may result in a head injury, shall be fitted with a head and chin harness to ensure the helmet does not dislodge during a free-fall. The chin strap strength shall be at least 150N.

PH 1.2101 2.1407 All ladders except step ladders shall be fitted with a headrope:
- of adequate length
- of good quality
- having a diameter of not less than 8 mm and a breaking load of not less than 8 kN or an approved alternative ladder top securing arrangement.

PH 1.2111 2.1407 All ladders and their associated ropes and ladder top securing arrangements shall be thoroughly inspected periodically by a competent person and found to be free of defects. The record of inspection shall be kept and made available to ladder users.

PH 1.2121 2.1209 All temporary work platforms used for work at height must have a guardrail in place.

1.3. Provide instruction

2.2. Assign resources

PH 1.3011 1.607 For work on poles and pole structures, procedures shall be developed and implemented that enable workers to be attached at all times.

PH 2.2011 2.1215 Working alone at height shall be permissible only when workers are using an enclosed work environment, total restraint, or a personal fall arrest system that does not allow free fall.

ladder

Exact matches found in:
P - Positions
PH - Work at height
1.2. Provide equipment (3)
3.2. Select equipment (3)
4.4. Set up positions (4)
6.2. Use equipment (4)

Partial matches found in:
S - Security
SP - Site protection
8.1. Pack up site (3)
P - Positions
PH - Work at height
3.3. Inspect equipment (4)
6.1. Monitor and control (1)
E - Energy
EE - Electrical hazards
4.2. Allocate tasks (1)
6.1. Monitor and control (2)
T - Technology
TL - Load-bearing tool work
4.1. Create safety plan (1)
No similar matches found



The Knowledge Network – Landing page / Publications

HEALTH & SAFETY - (Safety Standards and Procedures Group)

Arc Flash (Guide)	Assurances - Guide	Auditing Guide - Permit and Minor Works Management Systems - October...	Automatic Reclose of HV Circuits Following a Fault (Guide)	Control of Work in Workshops, Depots, and the Field	Critical Risks (Health & Safety)	Electrical Network Safety for Emergency Services Personnel (Guide)	Electrical Safety for Forestry & Woodlot Logging Operations (Guide)
High Voltage Single Wire Earth-Return (SWER) Systems (Guide)	Low Voltage Works Management for Distribution (Network)... DIGITAL EDITION	Low Voltage Works Management for Distribution (Network)...	Management of Heat and Cold Stress During Live Work (Guide)	Marking of Equipment for Access for Work (Guide)	Network Fault Management - Guide to Manual Closing and Hazard Management	Overlapping Duties under the Health and Safety at Work Act (Guide)	Portable Equipment for Work On or Near Conductors (Technical Guide)
Principles for Permit Areas (Guide)	Safe Practices for Low Voltage Electrical Work - July 2012	Safe Work With Cables (Guide)	Safe Work with Cables (Guide) DIGITAL EDITION	Safety Checking of Private Overhead Lines (Discussion Paper)	Safety Management for Overhead and Underground Power Line Crossings of...	SM-EI DIGITAL EDITION	Supervision for Health and Safety (Guide)
Switching Instructions and Communications: Technical Guide	Testing of Service Connections to Premises DIGITAL EDITION	Testing of Service Connections to Premises Guide	Transport of High Loads through Electricity Network Areas in New Zealand	Use of Mobile Plant - ESI Employees (Guide)	Use of Mobile Plant - Non ESI Employees (Guide)	Use of Personal Fall-Arrest Systems (Guide)	Work on De-Energised Distribution Overhead Lines DIGITAL EDITION
Work on De-Energized Distribution Overhead Lines...	Work on Poles and Pole Structures (Guide)	 SHOP FOR MORE					

LINE MECHANICS AND CABLE JOINTERS - (Special Interest Group)

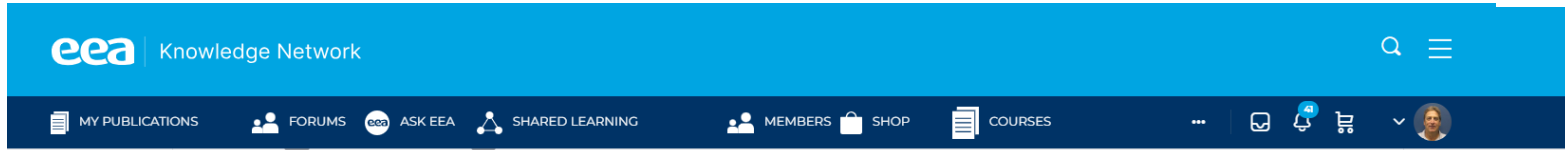
Safe Work with



Electricity Engineers' Association



The Knowledge Network - Forums



ESC TESTING

Posted by craig-sutherlandcountiesenergy-co-nz on February 21, 2024 at 9:40 am

Hi all,

When completing an ESC form, is it required to sight the customers earth pin before commencing with tests and then to perform a continuity test between the earth pin and the MEN ? We have received conflicting guidance on the topic.

Thank you

Grame Jackson replied 1 week, 5 days ago · 5 Members · 4 Replies

4 Replies



gbrownnovaenergy-co-nz

Member · February 21, 2024 at 12:25 pm

From what I can see, looking at the Regulations, if the ESC relates to an installation or part of an installation, then ESR73A(1)(e) would apply unless ESR73A(3) and (4) can be applied.



paul.smeets@topenergy.co.nz

Member · February 21, 2024 at 2:04 pm

From a line mechanics point of view, I think establishing that an earth pin is in place is part of your visual pre-living tests, followed by polarity, voltage and loop impedance. Main earth conductor and equipotential bonding tests are a requirement for a new installation however in our company these are carried out by an electrical inspector prior to their approval to live.

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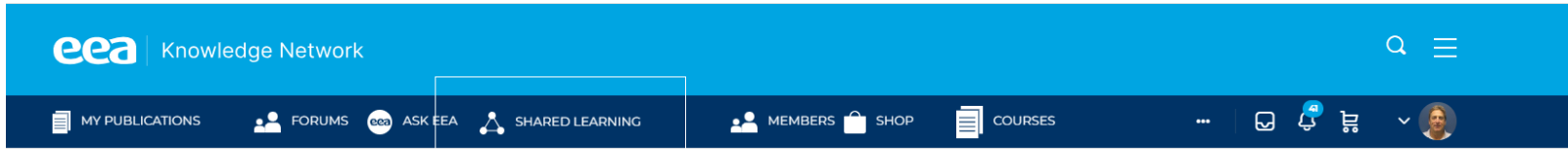
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Featured ✓ Solved 222 views James Dodwell (EEA) Marked as featured question June 7, 2021 Training & Development
1 votes 4 ans
- SM-EI – what's changed from 2015?**
Featured ✓ Solved 97 views James Dodwell (EEA) Marked as featured question June 7, 2021 Health & Safety
0 votes 2 ans
- Minimum Safe Approach Distance limits for competent employees from exposed live parts**
19 views Tracy Hobbs Changed status to publish December 12, 2023 Health & Safety
0 votes 1 ans

Categories

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18 Questions
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10 Questions
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7 Questions
- Overhead & Underground Lines & Poles**
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- Live Work**
3 Questions
- Training & Development**
3 Questions
- Public Safety**
3 Questions
- Asset Management**
1 Question



The Knowledge Network – Shared learning



Safety Alerts > / New Zealand > / 2023

▶ Safety Alerts

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<input type="checkbox"/> 63 - 2023 (NZ) 400V Switchboard Arc Over Event	Over Event	231 KB	21-12-2023	Download	Preview	
<input type="checkbox"/> 62 - 2023 (NZ) Securing of Loads on Trucks & Trailers	Trucks & Trailers	149 KB	21-12-2023	Download	Preview	
<input type="checkbox"/> 61 - 2023 (NZ) Portable Earth Devices Standard	Standard	189 KB	21-12-2023	Download	Preview	
<input type="checkbox"/> 60 - 2023 (NZ) Safe Transportation of				Download		



The Knowledge Network

Introduction to the Knowledge Network and the digital SM-EI

START

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SM-EI Overview and the Knowledge Network

Questions

