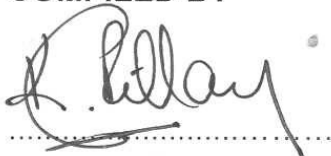
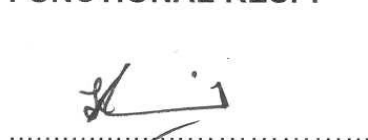


Title: **Working at Height**Unique identifier: **32-418**Document type: **EPC**Revision: **0**Total pages: **10**Revision date: **1 September 2011****COMPILED BY****K Pillay**  
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## 1 Introduction

Working at height is a significant composition of work within Eskom Holdings. Working at height is a high-risk activity, and as such, all precautions must be taken to prevent incidents while working at height.

Eskom's responsibility and commitment to ensure a safe working environment are in line with our Safety, Health, and Environmental Policy, along with legislative obligations. The objective of this procedure is to outline the process and ensure that a common management approach is adopted throughout Eskom in preventing falls-from-height incidents.

## 2 Requirements

### 2.1 Fundamentals

- a) Wherever reasonably practicable, preference must be given to the performance of work at ground level as opposed to in an elevated position.
- b) Where work in an elevated position is necessary, preference shall be given to fall prevention measures such as, but not limited to, effective barricading and the use of work platforms.
- c) Persons may only work from a fall risk position if:
  - a working at heights risk assessment has been completed for the work to be conducted;
  - a safe work procedure/task analysis and work instruction, approved by a competent person, are in place;
  - a fall rescue plan, along with necessary equipment and trained rescuers, is in place;
  - appropriate training, as determined by the risk assessment, has been provided; and
  - appropriate height safety equipment and personal protective equipment have been issued to the individual.
- d) While work is in progress, adequate warning signs and/or barricades shall be used in all areas where there is a risk of persons being injured by materials or equipment falling from the work area. Barricades should be continuous and easily visible.
- e) A drop zone shall be established with appropriate warning signs and barrier tape or barricading, warning personnel below of workers above and potential falling objects.

### 2.2 Risk assessment

A risk assessment allows for careful examination of what could cause harm to people as a result of a work activity, and it allows you to take the necessary precautions to prevent the harm occurring.

- a) When considering work at height, a risk assessment must be conducted. There are four basic steps that should be followed:
  - Step 1: hazard identification (identify the problem).
  - Step 2: assess the risk (determine the seriousness of the problem).
  - Step 3: eliminate or control risks (decide what needs to be done to solve the problem).
  - Step 4: review the risk assessment process and control measures to ensure that risks are still adequately addressed (update if necessary).
- b) Working at height risk assessments shall take into account factors such as:
  - the necessity for the work to be done in an elevated position as opposed to on the ground;
  - barricading and other fall prevention measures;
  - requirements of the safe work procedure;
  - height being worked at;
  - possible injuries;
  - duration of exposure;
  - frequency of performing these activities;

- type of work and ergonomic considerations;
  - work site/area congestion;
  - potential/likelihood/causes of a fall occurring;
  - endurance of workers;
  - risk control measures;
  - electrical hazards and safe clearances from overhead power lines;
  - structure (ease of access, secure footing, and compatibility with fall prevention and/or fall arrest equipment);
  - terrain;
  - restrictions with reference to working alone;
  - falling objects; and
  - suitable anchor points.
- c) Approved written safe work procedures/task analysis and work instruction shall be developed for all elevated work and made available to all persons carrying out the work. Standard procedures may be suitable for most work; however, unusual conditions or architectural features may require additional site-specific procedures. The person supervising the work must ensure that safe work procedures/task analysis and work instructions are followed at all times.
- d) Be aware of hazards resulting from adverse weather conditions, and where necessary, modify the work method accordingly.
- e) The content and intervals of planned job observations shall be determined during the risk assessment.
- f) Risk assessment shall include the rescue plan.
- g) Risk assessments shall be performed and documented by competent persons.
- h) The mitigation process from the risk assessments must influence the content of the Fall Protection Plan.
- i) In the case of live work, work shall be conducted according to standards and procedures while maintaining minimum safe working clearance.
- j) Take into account the risks associated with objects falling from heights. Tools and equipment shall be safely secured and attached to the body or structure.

## **2.3 Fall Protection Plan**

- a) A task-/job-specific Fall Protection Plan shall be developed and approved by a competent person for any activity where there is a risk of a fall.
- b) The Fall Protection Plan shall include a task-/job-specific risk assessment and requirements relating to the following:
- Training programme for employees working from a fall risk position
  - Appointments and authorisations
  - The procedure addressing the inspection, testing, and maintenance of all fall protection equipment
  - The processes for evaluation of the employees' medical fitness necessary to work in a fall risk position and the records thereof (medical surveillance programme)
  - Equipment use and specification
  - Fall prevention, fall arrest, and fall rescue
  - Method statements or safe work procedures/task analysis/work instruction
- c) The Fall Protection Plan and its requirements shall be integrated into the Health and Safety Plan.
- d) Adherence to the Fall Protection Plan is mandatory.

- e) The Fall Protection Plan shall be suitably amended in accordance with the risk assessment, equipment technology, standards, and legislation.

## **2.4 Training and authorisation**

- a) All users of height safety equipment for working at height shall be trained, assessed, and declared competent for the specific height safety equipment and associated structures.
- b) The need for refresher training shall be determined by the employer, taking into account factors such as period of inactivity and changing circumstances as determined by risk assessments and job observations.
- c) Work at height and rescue training shall be provided by Eskom-approved instructors and service providers, taking into consideration the appropriate unit standards.
- d) Rescue training, where necessary, shall include self rescue and buddy rescue.
- e) Documented training records for all work at height training shall be maintained.

## **2.5 Height safety equipment specifications**

- a) All height safety equipment purchased shall conform to relevant national standards, international standards, statutory requirements, and approved Eskom divisional-specific requirements.
- b) All height safety equipment shall be supplied with an appropriate maintenance, testing, and inspection standard.
- c) Any new or amended specification and/or standard for height safety equipment shall be subjected to a technical assessment by a competent person or relevant divisional work groups prior to any acquisitions.
- d) Each division shall ensure that all height safety equipment in use at the time of this procedure's first issue shall be assessed and verified for compliance with relevant standards and specifications within six months of the effective date of this procedure.
- e) Replacement of height safety equipment not meeting the relevant standards and specifications shall be completed within twelve months of the effective date of this procedure. The use of a work positioning belt with a work positioning lanyard (safety belt) is strictly prohibited when working at height.

## **2.6 Personal protective equipment (PPE)**

- a) When working at height, appropriate PPE as determined by the risk assessment and written safe work procedure/task analysis/work instruction shall be used at all times.
- b) The type of personal protective equipment to be used must be appropriate to the activity and provide adequate hand, eye, face, foot, and head protection.
- c) Work restraint methods must be used before placing workers in fall arrest situations.
- d) Once issued to an individual, that particular fall prevention and/or fall arrest system shall be for the exclusive use and control of that user. A formal issue control system shall be implemented that records:
  - condition of equipment when issued;
  - condition of equipment when returned;
  - name and employee number of user;

- name and employee number of issuer;
- date(s) of issue and return;
- any acceptable repairs carried out; and
- any deployment of the fall arrest system.

## **2.7 Inspection, care, and maintenance**

- a) All fall prevention and/or fall arrest equipment shall be uniquely marked and/or numbered and registered on a statutory and/or approved maintenance register for inspection, testing, and maintenance.
- b) Only competent persons shall be allowed to inspect, test, and maintain fall prevention and/or fall arrest equipment.
- c) The inspection by the competent person shall not replace the inspection that must routinely be performed by the user prior to using the equipment.
- d) Where a user suspects that fall prevention and/or fall arrest equipment is unsafe, the equipment shall immediately be withdrawn from service and inspected by a competent person.
- e) Where an inspection carried out by a competent person reveals that an item is unsafe to use, that item shall be withdrawn from service immediately and either repaired to original specification by the supplier or approved agent or destroyed.
- f) After a fall arrest system has activated/operated, it shall be removed from service until it has been inspected and recertified as safe for use by the manufacturer or the authorised agent.
- g) All fall prevention and/or fall arrest equipment shall be transported and stored as per the manufacturer's specifications.
- h) No fall prevention and/or fall arrest equipment may be painted and/or defaced or modified in any way without the prior approval of a competent person.

## **2.8 Disposal of height safety equipment**

- a) There shall be a divisional and/or business unit procedure for the disposal and/or destruction of all withdrawn height safety equipment that cannot be satisfactorily repaired as per 2.7(e).

## **2.9 Medical fitness**

- a) "Working at height" shall be indicated on all job specifications of employees expected to work at height and shall be taken into account in all medical and psychological assessments/surveillances.
- b) It is a prerequisite for workers to be medically and psychologically fit to work safely in a fall risk position or such similar environment, and as proof thereof, those workers shall be in possession of a medical certificate of fitness.
- c) Where applicable, medical certificates shall indicate any restrictions and/or cautions with respect to a person's ability to work at heights. This may be in the form of a recommendation or an absolute prohibition.
- d) Subject to the medical certificate, the supervisor's on-the-job assessment, and the working at heights risk assessment, workers may be prohibited from working at heights on the following grounds:
  - Underlying medical and psychological conditions (for example, vertigo, epilepsy, partial physical disability, etc.)
  - Medication (acute and/or chronic)

- Uncontrollable chronic medical conditions (for example, diabetes, hypertension, etc.)
- Temporary emotional distress
- Any psychiatric and cognitive impairment
- Any disorder that has a bearing on safety of self and others

### 3 Supporting clauses

#### Index of supporting clauses

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### 3.1 Scope

#### 3.1.1 Purpose

This procedure defines the framework that must be followed to ensure that work at height is carried out safely in terms of Eskom's SHE Policy and legislative requirements.

#### 3.1.2 Applicability

This procedure shall apply to Eskom Holdings Limited and its divisions, subsidiaries, and contractors, where work at height is conducted by, or on behalf of, Eskom. This procedure and any other applicable legislative requirements are applicable to any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall.

### 3.2 Normative/informative references

#### 3.2.1 Normative

Parties using this procedure must apply the latest edition of the documents listed below:

- Occupational Health and Safety Act, Act 85 of 1993.
- Medical Surveillance Procedure 32-282.
- Eskom SHE Policy 32-94.
- Construction SHE Management Procedure 32-136.
- Substance Abuse Procedure 32-37.
- Eskom Cardinal Rules Procedure 32-421.

### 3.2.2 Informative

SABS EN 353-1:1992, *Personal protective equipment against falls from a height – Guided type fall arresters on a rigid anchorage line.*

SABS EN 353-2:1992, *Personal protective equipment against falls from a height – Guided type fall arresters on a flexible anchorage rope.*

SABS EN 354:1992, *Personal protective equipment against falls from a height – Lanyards.*

SABS EN 355:1992, *Personal protective equipment against falls from a height – Energy absorbers.*

SABS EN 358:1992, *Personal equipment for work positioning and prevention of falls from a height – Work positioning systems.*

SABS EN 361:1992, *Personal protective equipment against falls from a height – Full body harness.*

SABS EN 362:1992, *Personal protective equipment against falls from a height – Connectors.*

SABS EN 363:1992, *Personal protective equipment against falls from a height – Fall Arrest System.*

SABS EN 365:1992, *Personal protective equipment against falls from a height – General requirements for instructions for use and for marking.*

SABS EN 795:1992, *Protection against falls from height – Anchorage devices; Requirements and Testing.*

SABS EN 795:1996, *Protection against falls from height – Anchor devices; Requirements and testing.*

SABS EN 341: *Personal protective equipment against falls from a height – Descender device.*

SABS EN 353 part 1 and 2: *Personal protective equipment against falls from height – Guided type fall arresters including a flexible anchor line.*

SABS EN 397: *Safety helmets for industrial use and for firemen.*

### 3.3 Definitions

**3.3.1 Work at height:** any work performed above a stable work surface, or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into. Work at height is, as a result, work in any place, including a place at, above, or below ground level, where a person could be injured if he/she fell from that place. Access and egress to a place of work can also be work at height.

**3.3.2 Height safety equipment:** any equipment used while working at height and includes the following categories:

- Equipment used to work at height, for example, scaffold, ladders, mobile elevated work platforms, platforms, climbing irons, etc.
- Fall prevention equipment (*defined in 3.3.9*)
- Fall arrest equipment (*defined in 3.3.10*)

**3.3.3 Competent person:** competent person for any task means a person who has acquired, through training, experience, qualifications and/or experience, or a combination of them, the knowledge and skills to carry out that task, provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training.

**3.3.4 Employer:** means any person who employs or provides work to any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her.

**3.3.5 Medical fitness:** means being declared fit to work safely in a fall risk position or such similar environment and being in possession of a medical certificate of fitness.

**3.3.6 Psychological fitness:** means a state in which a person demonstrates the energy and motivation to be able to act safely:

- by recovering well from demands of any task;
- by quickly giving attention to fresh tasks; and
- by recovering readily from any setback, while also learning from any mistakes or the conditions that led to a lapse of attention or to a slip in execution.

**3.3.7 Medical certificate of fitness:** means a certificate valid for one year issued, in terms of the Construction Regulations, by an occupational health practitioner, who shall be registered with the Health Professions Council of South Africa, provided that such certificate will become invalid,

temporarily or permanently, subject to a consultation with a health practitioner, if medical or mental conditions occurred or emerged during the period.

**3.3.8 Risk assessment:** means a process of determining any risk associated with any hazard in order to identify the steps needed to be taken to mitigate, remove, reduce, or control such hazard. A risk assessment is typically a careful examination of what could cause harm to people as a result of a work activity, and it allows you to take the necessary precautions to prevent the harm occurring.

**3.3.9 Fall prevention equipment:** means equipment used to prevent persons from falling from a fall risk position, including personal equipment such as a body harness, lanyards, and lifelines or physical equipment such as guardrails, screens, barricades, anchorages, or similar equipment.

**3.3.10 Fall arrest equipment:** means equipment used to arrest the person in a fall, including personal equipment such as a body harness, lanyards, deceleration devices, lifelines, or similar equipment, but excluding single belts.

**3.3.11 Fall Protection Plan:** means a documented plan of all risks relating to working from a fall risk position, considering the nature of work undertaken and setting out the procedures and methods to be applied in order to eliminate and reduce the risk, and must include a rescue plan and procedures.

**3.3.12 Fall risk:** means any potential exposure to falling either from, off, or into.

**3.3.13 Training records (work at height):** documented training records that identify the holder as having successfully completed appropriate work at height training and medical fitness and that allow the holder to conduct permitted work.

**3.3.14 Task analysis:** is the systematic examination of all dangerous/hazardous tasks (work) in order to identify and quantify all the potential and existing inherent hazards to which employees are exposed while the task is being executed.

## **3.4 Abbreviations**

**3.4.1 CE:** Chief Executive

**3.4.2 MD:** Managing Director

**3.4.3 EDC:** Eskom Documentation Centre

**3.4.4 OHS Act:** Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

**3.4.5 OHSLC:** Occupational Health and Safety Liaison Committee

**3.4.6 PPE:** Personal Protective Equipment

**3.4.7 SHE:** Safety, Health, and Environment

## **3.5 Roles and responsibilities**

Eskom Holdings Ltd, its subsidiaries, and contractors shall take all reasonably practicable steps to prevent falls-from-height incidents. The delegated employer, in terms of section 16.2 of the OHS Act, shall be responsible for safety in their designated area of responsibility.

Each division shall compile appropriate documents to support this procedure.

### 3.6 Process for monitoring

Eskom Holdings Limited's 16.2 appointed person or his/her delegated person will monitor compliance with this procedure.

### 3.7 Related/supporting documents

None.

## 4 Authorisation

This document has been seen and accepted by:

<b>Name</b>	<b>Designation</b>
PJ Maroga	Chief Executive
BA Dames	Chief Officer Generation
EL Johnson	Chief Officer Networks and Customer Service
(Vacant)	Managing Director (Corporate Affairs)
B Nqwababa	Finance Director
ME Letlape	Managing Director (Human Resources Division)
Dr SJ Lennon	Managing Director (Corporate Services Division)

## 5 Revisions

<b>Date</b>	<b>Rev.</b>	<b>Remarks</b>
September 2008	0	A procedure with reference number 32-418 was developed, in alignment with the Eskom documentation requirements.

## **6 Development team**

This procedure was developed with input from the following members under OHSLC:

- K Pillay (Corporate Services Division)
- B Botha (Generation Division)
- E Mojapelo (Transmission Division)
- R McIntyre (Distribution Division)
- A Botha (Enterprises Division))
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