

# **Workplace Safety and Health (Work at Heights) Regulations 2013**

## **Table of Contents**

### **Enacting Formula**

#### **Part I PRELIMINARY**

##### **1 Citation and commencement**

##### **2 Definitions**

##### **3 Application**

#### **Part II GENERAL PROVISIONS**

##### **4 Avoidance of work at height**

##### **5 Fall prevention plan**

##### **6 Training for persons at work**

##### **7 Supervision of work at height**

##### **8 Open sides and openings**

##### **9 Cover, guard-rail and barrier to prevent fall**

##### **10 Travel restraint system**

##### **11 Fall arrest system**

##### **12 Inspection**

##### **13 Staircases**

**14 Safe means of access and egress between different working levels in building or structures**

**15 Teagle openings**

**16 Work on roofs**

**17 Fragile surfaces**

**18 Ladders**

### **Part III PERMIT-TO-WORK SYSTEM FOR HAZARDOUS WORK AT HEIGHT**

**19 (Deleted)**

**20 Implementation of permit-to-work system**

**21 No hazardous work at height without permit-to-work**

**22 Application for permit-to-work**

**23 Evaluation of application**

**24 Issue of permit-to-work**

**25 Posting of permit-to-work and supervisor's duty**

**26 Monitoring of work**

**27 Duty to report incompatible work**

**28 Daily review and revocation of permit-to-work**

### **Part IV INDUSTRIAL ROPE ACCESS SYSTEM**

**29 Industrial rope access equipment and personal protective equipment**

## **30 Design and inspection**

### **Part V MISCELLANEOUS**

## **31 Offence**

### **THE SCHEDULE Workplaces required to have a fall prevention plan**

**No. S 223**

#### **WORKPLACE SAFETY AND HEALTH ACT (CHAPTER 354A)**

#### **WORKPLACE SAFETY AND HEALTH (WORK AT HEIGHTS) REGULATIONS 2013**

In exercise of the powers conferred by section 65 of the Workplace Safety and Health Act, Mr Tan Chuan-Jin, Senior Minister of State, charged with the responsibility of the Minister for Manpower, hereby makes the following Regulations:

#### **PART I**

#### **PRELIMINARY**

#### **Citation and commencement**

1. These Regulations may be cited as the Workplace Safety and Health (Work at Heights) Regulations 2013 and shall come into operation on 1st May 2013.

#### **Definitions**

2. In these Regulations, unless the context otherwise requires —

“anchorage” means a place, a fixing or a fixture to which an anchorage line or lanyard is connected;

“anchorage line” means any flexible or rigid line connected at least at one end to a secure anchorage to provide a means of support or restraint for a person

wearing a full-body harness or restraint belt in combination with other devices, and includes a life line;

“competent person” means a person who has sufficient experience and training to perform the work required to be carried out, and has passed such courses as the Commissioner may require for that work;

“fall arrest system” means a system —

- (a) designed to prevent or reduce the severity of injury to a person in the event of a fall; and
- (b) consisting of equipment or material or a combination thereof, such as (but not limited to) —
  - (i) a safety net;
  - (ii) a full-body harness;
  - (iii) an energy absorbing device;
  - (iv) a lanyard; or
  - (v) an anchorage line and an anchorage,but does not include a restraint belt;

“fall prevention plan” means a documented site-specific plan prepared for the purpose of eliminating or reducing the risk of falls by ensuring that all reasonable fall prevention measures and methods have been implemented, prior to the commencement of work;

“fixed ladder” means a ladder that cannot be readily moved or carried because it is an integral part of a building or structure;

“fragile surface” means a surface which would be liable to fail if any reasonably foreseeable loading were to be applied to it;

“guard-rail” means a horizontal rail secured to uprights or structures and erected along an open or exposed side of any structure to prevent persons from falling;

“hazardous work at height” means work —

- (a) in or on an elevated workplace from which a person could fall;
- (b) in the vicinity of an opening through which a person could fall;
- (c) in the vicinity of an edge over which a person could fall;

- (d) on a surface through which a person could fall; or
- (e) in any other place (whether above or below ground) from which a person could fall,

a distance of more than 3 metres;

“industrial rope access system” means a system designed for the purpose of performing work on a building, structure or tree by a person and consists of —

- (a) equipment that enables a person to manually raise or lower himself in a harness supported by one or more ropes; and
- (b) equipment used to anchor the ropes;

*[S 280/2014 wef 01/05/2014]*

“professional engineer” means a person registered as a professional engineer and who has in force a practising certificate issued under the Professional Engineers Act (Cap. 253);

“responsible person”, in relation to a person who carries out or is to carry out any work at height, means —

- (a) his employer; or
- (b) the principal under whose direction he carries out or is to carry out any such work;

“safety line”, in relation to an industrial rope access system, means an anchorage line provided and used to protect a person against fall if the working line fails;

“scaffold” means any temporary structure —

- (a) on or from which any person performs work in any workplace; or
- (b) which enables any person to obtain access to or which enables any material to be taken to any place at which such work is performed,

and includes any suspended scaffold, hanging scaffold, tubular scaffold, trestle scaffold, gangway, run and toe-boards, but does not include a lifting appliance, a lifting machine or a structure used merely to support such an appliance or such a machine or to support other plant or equipment;

“shipyard” means any yard (including any dock, wharf, jetty, quay and the precincts thereof) where the construction, reconstruction, repair, refitting, finishing or breaking up of ships is carried out, and includes the waters adjacent to any such yard where the construction, reconstruction, repair, refitting,

finishing or breaking up of ships is carried out by or on behalf of the occupier of that yard;

“travel restraint system” means a system consisting of a full-body harness or restraint belt, attached to one or more lanyards, each of which is attached to an anchorage line or anchorage point, designed to restrict the travelling range of a person wearing the full-body harness or restraint belt so that the person cannot get into a position where the person could fall off an edge of a surface or through a surface;

“work at height” means work —

- (a) in or on an elevated workplace from which a person could fall;
- (b) in the vicinity of an opening through which a person could fall;
- (c) in the vicinity of an edge over which a person could fall;
- (d) on a surface through which a person could fall; or
- (e) in any other place (whether above or below ground) from which a person could fall,

from one level to another and it is reasonably likely that the person or any other person would be injured due to the distance of the fall;

“working line”, in relation to an industrial rope access system, means an anchorage line used primarily for work positioning including descending and ascending;

“work platform” means a platform which is used to support any person or materials;

“worksite” means any premises where any building operation or works of engineering construction is or are being carried out, whether or not by or on behalf of the Government or a statutory body, and includes any line or siding (not forming part of a railway) which is used in connection with the building operation or works of engineering construction.

## **Application**

**3.—**(1) During the period between 1st May 2013 and 30th April 2014 (both dates inclusive), these Regulations (except Part III) shall apply only to every workplace which is a factory.

*[S 280/2014 wef 01/05/2014]*

(2) From 1st May 2014, these Regulations (except Part III) shall apply to every workplace, whether or not a factory.

*[S 280/2014 wef 01/05/2014]*

(3) Part III shall apply only to hazardous work at height carried out at a factory on or after 1st May 2014.

*[S 280/2014 wef 01/05/2014]*

## PART II

### GENERAL PROVISIONS

#### **Avoidance of work at height**

4. It shall be the duty of the responsible person of any person who carries out or is to carry out any work at height to ensure that no work at height is carried out where it is reasonably practicable to carry out the work safely otherwise than at height.

#### **Fall prevention plan**

5.—(1) It shall be the duty of the occupier of every workplace specified in the Schedule, and in which work at height is carried out, to establish and implement a fall prevention plan.

(2) The fall prevention plan referred to in paragraph (1) shall be established and implemented in accordance with the requirements of the approved code of practice relating to safe and sound practices for fall prevention.

(3) It shall be the duty of the occupier of every workplace specified in the Schedule to ensure that the fall prevention plan referred to in paragraph (1) is made available for inspection upon request by any inspector.

(4) Any occupier of a workplace specified in the Schedule who contravenes paragraph (3) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$10,000.

(5) This regulation shall apply only to work at height carried out on or after 1st May 2014.

#### **Training for persons at work**

6. It shall be the duty of the responsible person of any person who carries out or is to carry out any work at height to ensure that the person shall work at height in a workplace only after he has first received adequate safety and health training to familiarise himself with the hazards associated with work at height and the precautions to be observed.

#### **Supervision of work at height**

7. It shall be the duty of the responsible person of any person who carries out or is to carry out any work at height to ensure that the person shall work at height in a workplace under the immediate supervision of a competent person for that work.

### **Open sides and openings**

8.—(1) It shall be the duty of the occupier of a workplace to comply with paragraphs (2), (4) and (5).

(2) Subject to paragraphs (3) and (5), every open side or opening into or through which a person is liable to fall more than 2 metres shall be covered or guarded by effective guard-rails or barriers to prevent fall.

(3) The cover, guard-rail or barrier referred to in paragraph (2) may be removed where free access is required for work actually in progress at or near the open side or opening.

(4) Every cover, guard-rail or barrier referred to in paragraph (2) which is removed under paragraph (3) shall be reinstated or replaced immediately when access of persons or movement of materials is not taking place at or near the open side or opening.

(5) Where it is not reasonably practicable to comply with paragraph (2), or where a cover, guard-rail or barrier is removed under paragraph (3), or during the installation, alteration or removal of the covers, guard-rails or barriers —

- (a) a travel restraint system shall be used to prevent a person falling into or through the open side or opening referred to in paragraph (2); or
- (b) where it is not reasonably practicable to comply with sub-paragraph (a), a fall arrest system shall be used.

### **Cover, guard-rail and barrier to prevent fall**

9.—(1) This regulation does not apply in relation to any scaffold in a workplace which is, is being or is to be constructed, erected, installed, used, re-positioned, altered, maintained, repaired or dismantled.

*[S 280/2014 wef 01/05/2014]*

(2) Where a cover is provided in a workplace to prevent any person from falling, it shall be the duty of the occupier of the workplace to ensure that the cover —

- (a) is of good construction, sound material and adequate strength to withstand the impact during the course of work in the workplace; and
- (b) is securely fixed in place to prevent accidental displacement.

(3) Where any guard-rail or barrier is provided in a workplace to prevent any person



from falling, it shall be the duty of the occupier of the workplace to ensure that —

- (a) every guard-rail or barrier —
  - (i) is of good construction, sound material and adequate strength to withstand the impact during the course of work in the workplace;
  - (ii) is placed on the inside of the uprights or structures and secured so as to prevent accidental displacement; and
  - (iii) is so placed so as to prevent the fall of any person;
- (b) the top guard-rail or the barrier is at least one meter above the work platform or working place from which any person at work is liable to fall; and
- (c) the vertical distance —
  - (i) between any 2 adjacent guard-rails provided; or
  - (ii) between any work platform or working place and the guard-rail immediately above it,does not exceed 600 millimetres.

### **Travel restraint system**

**10.** Where a travel restraint system is used in a workplace, it shall be the duty of the responsible person of a person who carries out or is to carry out any work at height to ensure that —

- (a) the travel restraint system —
  - (i) is of good construction, sound material and adequate strength;
  - (ii) is free from patent defects; and
  - (iii) is suitable and safe for the purpose for which it is intended; and
- (b) every person using the travel restraint system is trained in the safe and correct use of the system.

### **Fall arrest system**

**11.—(1)** Where a fall arrest system is used in a workplace, it shall be the duty of the responsible person of any person who carries out or is to carry out at that workplace any

work at height to ensure that —

- (a) the fall arrest system —
  - (i) is of good construction, sound material and adequate strength;
  - (ii) is free from patent defects; and
  - (iii) is suitable and safe for the purpose for which it is intended;
- (b) every person using the fall arrest system is trained in the safe and correct use of the system; and
- (c) no part of the fall arrest system comes into contact with anything that could affect the safe use of the system.

(2) Where a fall arrest system using a full-body harness is used in a workplace, it shall be the duty of the responsible person of any person who carries out or is to carry out at that workplace any work at height to ensure that —

- (a) the system incorporates a suitable means of absorbing energy and limiting the forces applied to the user's body; and
- (b) in the event of a fall, there is enough fall clearance available to prevent the user from hitting an object, the ground or other surfaces.

## Inspection

**12.—**(1) Where any travel restraint system or any fall arrest system is to be used in a workplace, it shall be the duty of the responsible person of a person who carries out or is to carry out at the workplace any work at height to appoint a competent person for the purpose of inspecting the anchorage and anchorage line of the travel restraint system or fall arrest system.

(2) It shall be the duty of the competent person appointed by a responsible person under paragraph (1) —

- (a) to inspect the anchorage and anchorage line of the travel restraint system or fall arrest system at the start of every work shift to ensure that they are in good working condition and are safe for use;
- (b) to immediately remove from service any such anchorage or anchorage line which is found to be defective;
- (c) to immediately enter the results of every inspection referred to in subparagraph (a) into a register containing such details as may be required by the Commissioner; and

(d) to provide the register to the responsible person before the end of the work shift.

(3) It shall be the duty of the responsible person referred to in paragraph (1) —

(a) to keep each entry in the register referred to in paragraph (2)(c) for not less than 2 years from the date it is made; and

(b) to produce for inspection, upon request by any inspector, any entry in the register which is so requested to be inspected.

(4) Any responsible person who contravenes paragraph (3) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

### **Staircases**

**13.** It shall be the duty of the occupier of a workplace to ensure that every staircase in the workplace or every staircase which affords a means of exit from the workplace shall be provided and maintained with a substantial handrail and lower rail or other barrier to prevent any person falling, which —

(a) if the staircase has an open side, shall be on that side; or

(b) if the staircase has 2 open sides, shall be on both sides.

### **Safe means of access and egress between different working levels in building or structures**

**14.** Where in a workplace any person is required to carry out any work at height —

(a) in or on an elevated place from which the person could fall;

(b) in the vicinity of an opening through which the person could fall;

(c) in the vicinity of an edge over which the person could fall;

(d) on a surface through which the person could fall; or

(e) in any other place (whether above or below ground) from which the person could fall,

it shall be the duty of the occupier of the workplace to take, so far as is reasonably practicable, such measures as are necessary to ensure safe means of access to and egress from any area in the workplace referred to in paragraph (a), (b), (c), (d) or (e).

### **Teagle openings**

**15.**—(1) It shall be the duty of the occupier of a workplace to ensure that every teagle opening or similar doorway used for hoisting or lowering goods or materials in the workplace, whether by mechanical power or otherwise —

- (a) is securely fenced; and
- (b) is provided with a secure handhold on each side of the opening or doorway.

(2) It shall be the duty of the occupier of the workplace to ensure that every fencing referred to in paragraph (1) shall —

- (a) be properly maintained; and
- (b) be kept in position, except when goods or materials are being hoisted or lowered at the opening or doorway.

### **Work on roofs**

**16.** Where in a workplace any person carries out any work on any roof from which he is liable to fall off or through a distance of more than 2 metres, it shall be the duty of the responsible person of that person —

- (a) to provide and maintain —
  - (i) protection of the person against any sliding or falling from the roof (which may include crawler boards or roof brackets); and
  - (ii) sufficient and secured anchorage for the attachment of a full-body harness or a restraint belt, as the case may be, in the course of the person's work; and
- (b) to ensure that the person who carries out such work in that workplace uses the protection and anchorage referred to in paragraph (a).

### **Fragile surfaces**

**17.**—(1) Subject to paragraph (2), it shall be the duty of the responsible person of a person who carries out or is to carry out work at height to ensure that the person at work —

- (a) shall not pass across or near a fragile surface; and
- (b) shall not work on, from or near a fragile surface,

where it is reasonably practicable to carry out the work without him doing so.

(2) Where it is not reasonably practicable to carry out work at height safely without

passing across or near, or working on, from or near, a fragile surface, it shall be the duty of the responsible person of a person who carries out or is to carry out work at height to, so far as is reasonably practicable, provide and maintain suitable and sufficient platforms, covers, guard-rails or similar means of support or protection so that any foreseeable loading is supported by such supports or borne by such protection.

(3) Where any person carrying out work at height may pass across or near, or work on, from or near, a fragile surface, it shall be the duty of the responsible person of that person to ensure —

- (a) that prominent warning notices are affixed at the approach to the place where the fragile surface is situated; or
- (b) where it is not reasonably practicable to comply with sub-paragraph (a), that the person at work is made aware of it by other means.

## **Ladders**

**18.**—(1) Where a ladder is being used to carry out any work at height in a workplace, it shall be the duty of the responsible person of the person who is carrying out or is to carry out the work to ensure that the requirements in paragraphs (2) to (6) are complied with.

(2) Every ladder in a workplace shall —

- (a) be of good construction, sound material and adequate strength;
- (b) be free from patent defects; and
- (c) be suitable and safe for the purpose for which it is intended.

(3) The surface upon which any ladder (except for fixed ladders) rests or bears upon when used by a person shall —

- (a) be stable;
- (b) be level and firm; and
- (c) be of sufficient strength to safely support the ladder and any person and load intended to be placed on it.

(4) Every ladder in a workplace shall be so positioned as to ensure its stability during use.

(5) Notwithstanding paragraph (4), every ladder which leans against a wall, building, structure or tree during use shall be securely fixed or lashed, or is firmly held by a person stationed at the foot of the ladder to prevent the ladder from slipping.

*[S 280/2014 wef 01/05/2014]*

(6) Where a ladder is used for access or as a working place, the ladder shall rise, or adequate handhold shall be provided, to a height of at least one metre above —

- (a) the place of landing; or
- (b) the highest rung to be reached by the feet of any person working on the ladder.

(7) Where a fixed vertical ladder is used in a workplace, it shall be the duty of the occupier of the workplace to ensure that the requirements in paragraphs (8), (9) and (10) are complied with.

(8) Every fixed vertical ladder or run of fixed vertical ladders used by any person carrying out any work which rises a vertical distance of over 9 metres shall, if practicable, be provided with an intermediate landing place so that the vertical distance between any 2 successive landing places does not exceed 9 metres.

(9) Every landing place referred to in paragraph (8) shall be provided with sufficient and suitable guard-rails or barriers to prevent falls.

(10) Where a fixed vertical ladder used by any person carrying out any work in a workplace rises a vertical distance of more than 3 metres, there shall be provided a safety cage or other practicable measures to prevent fall of the person.

### PART III

#### PERMIT-TO-WORK SYSTEM FOR HAZARDOUS WORK AT HEIGHT

**19.** *[Deleted by S 280/2014 wef 01/05/2014]*

#### **Implementation of permit-to-work system**

**20.—**(1) Before the carrying out of any hazardous work at height at a factory, it shall be the duty of the occupier of the factory to —

- (a) appoint a competent person for the hazardous work at height at the factory to carry out the duties of an authorised manager in accordance with this Part; and
- (b) appoint a competent person for the hazardous work at height at the factory to carry out the duties of a work-at-height safety assessor in accordance with this Part.

*[S 280/2014 wef 01/05/2014]*

(2) Before and during the carrying out of any hazardous work at height at a factory, it

shall be the duty of the occupier of the factory to ensure that a permit-to-work system in accordance with this Part is implemented for that hazardous work at height.

*[S 280/2014 wef 01/05/2014]*

(3) The permit-to-work system referred to in paragraph (2) shall provide that —

- (a) the hazardous work at height is carried out with due regard to the safety and health of persons carrying out the work;
- (b) such persons are informed of the hazards associated with the hazardous work at height and the precautions they have to take; and
- (c) the necessary safety precautions are taken and enforced when the hazardous work at height is being carried out.

*[S 280/2014 wef 01/05/2014]*

### **No hazardous work at height without permit-to-work**

**21.**—(1) Subject to paragraph (2), any person who carries out any hazardous work at height in a factory without a permit-to-work first issued by the authorised manager in respect of that hazardous work at height shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$20,000.

*[S 280/2014 wef 01/05/2014]*

(2) Nothing in paragraph (1) shall operate to interfere with or render unlawful any rescue work or other work necessary for the general safety of life or property.

### **Application for permit-to-work**

**22.** An application for a permit-to-work to carry out any hazardous work at height shall —

- (a) be made by the supervisor of the person who is to carry out the hazardous work at height;
- (b) be made in such form and manner as may be required by the authorised manager;
- (c) state the measures which will be taken to ensure the safety and health of the person who is to carry out the hazardous work at height; and
- (d) be addressed to the authorised manager and submitted to the work-at-height safety assessor where the hazardous work at height is to be carried out.

### **Evaluation of application**

**23.**—(1) On receipt of the application for a permit-to-work, the work-at-height safety assessor shall —

- (a) assess whether all reasonably practicable measures have been taken to ensure the safety and health of the person who will be carrying out the hazardous work at height; and
- (b) inspect the site (including its surroundings) where the hazardous work at height is to be carried out together with the supervisor of the person who is to carry out the work, to ensure that the hazardous work at height can be carried out with due regard to the safety and health of the person and any other person at work in the factory who may be affected.

*[S 280/2014 wef 01/05/2014]*

(2) If the work-at-height safety assessor is satisfied that the hazardous work at height can be carried out in the factory with due regard to the safety and health of persons who are to carry out the hazardous work at height and of other persons at work in the factory who may be affected, he shall endorse the application for the permit-to-work and forward the endorsed application to the authorised manager.

*[S 280/2014 wef 01/05/2014]*

(3) It shall be the duty of the work-at-height safety assessor to exercise all due diligence when performing his functions in relation to the evaluation and endorsement of an application for a permit-to-work under paragraphs (1) and (2).

### **Issue of permit-to-work**

**24.**—(1) The authorised manager for any hazardous work at height at a factory may issue a permit-to-work in relation to any hazardous work at height which is to be carried out in the factory if the authorised manager is satisfied that —

- (a) there has been a proper evaluation of the risks and hazards involved in the carrying out of the work based on the available information;
- (b) no incompatible work which may pose a risk to the safety and health of other persons at work in the factory will be carried out at the same time in the same vicinity as the hazardous work at height;
- (c) all reasonably practicable measures will or have been taken to ensure the safety and health of the persons who carry out or are to carry out the hazardous work at height; and
- (d) all persons who are to carry out the hazardous work at height are informed of the hazards associated with it.

*[S 280/2014 wef 01/05/2014]*

(2) An authorised manager who issues a permit-to-work in respect of any hazardous



work at height shall retain a copy of the permit-to-work.

(3) It shall be the duty of the authorised manager to exercise all due diligence when performing his function in relation to the issuance of a permit-to-work under paragraph (1).

(4) Subject to regulation 28, a permit-to-work shall be valid for the period stated therein, and if the hazardous work at height for which the permit-to-work is issued is not completed within the validity period, a fresh application shall be made in accordance with regulation 22.

### **Posting of permit-to-work and supervisor's duty**

**25.** It shall be the duty of the supervisor of any person who carries out any hazardous work at height in a factory —

- (a) to clearly post, at the work area where the work is carried out, a copy of the permit-to-work issued in respect of that hazardous work at height, including (where reasonably practicable) a sketch of any area where the hazardous work at height is permitted; and
- (b) to ensure that the copy is not removed until the date of expiry or date of revocation of the permit-to-work, or on completion of the hazardous work at height, whichever is the earlier.

*[S 280/2014 wef 01/05/2014]*

### **Monitoring of work**

**26.—(1)** It shall be the duty of the authorised manager for any hazardous work at height at a factory to continually review the progress of all hazardous work at height being carried out in the factory to ensure that the hazardous work at height is carried out with due regard to the safety and health of the persons carrying out the hazardous work at height in the factory.

*[S 280/2014 wef 01/05/2014]*

(2) It shall be the duty of the supervisor of any person who carries out any hazardous work at height in a factory —

- (a) to ensure that the measures necessary to ensure the safety and health of the person at work are taken and are in place at all times during the validity period of the permit-to-work; and
- (b) to inform the authorised manager upon completion of the hazardous work at height.

*[S 280/2014 wef 01/05/2014]*

### **Duty to report incompatible work**

27.—(1) It shall be the duty of any person who is aware of any work being carried out in a factory which is incompatible with any hazardous work at height being carried out at that factory to immediately report the incompatible work to his supervisor, the workplace safety and health officer, the workplace safety and health co-ordinator or the authorised manager for that hazardous work at height.

*[S 280/2014 wef 01/05/2014]*

(2) In this regulation, any work in a factory which is carried out at or in the vicinity of any hazardous work at height and which is likely to pose a risk to the safety or health of persons at work in the factory shall be treated as incompatible work.

*[S 280/2014 wef 01/05/2014]*

### **Daily review and revocation of permit-to-work**

28.—(1) It shall be the duty of the authorised manager for any hazardous work at height at a factory to review and assess the need to continue the hazardous work at height on a daily basis, and to revoke the permit-to-work issued in respect of the hazardous work at height if he thinks fit to do so.

*[S 280/2014 wef 01/05/2014]*

(2) If after issuing a permit-to-work in respect of any hazardous work at height at a factory, the authorised manager is of the view that the carrying out of the hazardous work at height poses or is likely to pose a risk to the safety and health of the persons at work in the factory, he may order the hazardous work at height to cease immediately and revoke the permit-to-work.

*[S 280/2014 wef 01/05/2014]*

## **PART IV**

### **INDUSTRIAL ROPE ACCESS SYSTEM**

#### **Industrial rope access equipment and personal protective equipment**

29.—(1) Where any industrial rope access system is used in a workplace, it shall be the duty of the responsible person of a person who carries out or is to carry out work at height at a workplace to ensure that —

- (a) it comprises at least 2 independent anchorage lines, of which one is the working line and the other is the safety line;
- (b) the person who uses the industrial rope access system is provided with a suitable harness connected to the working line and the safety line;
- (c) the working line is equipped with safe means of ascent and descent and has

a self-locking system to prevent the user from falling should he lose control of his movements; and

- (d) no part of the system comes into contact with anything that could affect the safe use of the system.

(2) It shall be the duty of the responsible person of a person who carries out or is to carry out work at height at a workplace to ensure that every equipment of the industrial rope access system used in the workplace —

- (a) is of good construction, sound material and adequate strength;
- (b) is free from patent defects;
- (c) is properly maintained; and
- (d) carries a unique marking to allow traceability to a test inspection, thorough examination or a certificate of conformity.

### **Design and inspection**

**30.**—(1) Paragraphs (2), (3), (4) and 7(a)(ii) shall not apply in respect of an industrial rope access system used for tree-cutting or pruning.

(2) Where an industrial rope access system is used in a workplace, it shall be the duty of the responsible person of a person who carries out or is to carry out work at height in a workplace to ensure that every anchorage and anchorage line of the industrial rope access system is installed in accordance with the design and drawings of a professional engineer.

(3) It shall be the duty of a professional engineer who designs any anchorage and anchorage line of an industrial rope access system referred to in paragraph (2) —

- (a) to take, so far as is reasonably practicable, such measures to ensure that his design can be executed safely by any person who installs or uses the industrial rope access system according to his design; and
- (b) to provide to any person who installs or is to install the industrial rope access system, all design documentation (including all relevant calculations, drawings and construction procedures) as is necessary to facilitate the proper installation of the industrial rope access system according to his design.

(4) It shall be the duty of the responsible person of a person who carries out or is to carry out work at height in a workplace to ensure that no industrial rope access system is used at the workplace unless the design and drawings certified by the professional

engineer are kept available at the workplace.

(5) It shall be the duty of the responsible person of a person who carries out or is to carry out work at height in a workplace to appoint a competent person for any work at any workplace at which an industrial rope access system is used for the purpose of inspecting the industrial rope access system.

(6) It shall be the duty of the competent person referred to in paragraph (5) —

- (a) to inspect the industrial rope access system at the start of every work shift to ensure that it is in good working condition and is safe for use;
- (b) to immediately remove from service any equipment of the industrial rope access system which is found to be defective;
- (c) to immediately enter the results of every inspection referred to in subparagraph (a) into a register containing such details as may be required by the Commissioner; and
- (d) to provide the register to the responsible person before the end of the work shift.

(7) It shall be the duty of the responsible person of any person who carries out or is to carry out any work at height —

- (a) to keep —
  - (i) each entry in the register referred to in paragraph (6); and
  - (ii) the design documentation referred to in paragraphs (3) and (4), for not less than 2 years from the date it was made; and
- (b) to produce for inspection, upon request by an inspector, any entry in the register which is so requested to be inspected.

(8) Any responsible person who contravenes paragraph (7) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$2,000.

## PART V

### MISCELLANEOUS

#### Offence

**31.** Any person who contravenes regulation 4, 5(1), 6, 7, 8(1), 9(2) or (3), 10, 11(1) or (2), 12(1) or (2), 13, 14, 15(1) or (2), 16, 17(1), (2) or (3), 18(1) or (7), 20(1) or (2),

23(3), 24(3), 25, 26(1) or (2), 27(1), 28(1), 29(1) or (2) or 30(2), (3), (4), (5) or (6) shall be guilty of an offence and shall be liable on conviction to a fine not exceeding \$20,000 or to imprisonment for a term not exceeding 2 years or to both.

*[S 280/2014 wef 01/05/2014]*

## THE SCHEDULE

Regulation 5(1), (3) and (4)  
*[S 280/2014 wef 01/05/2014]*

### WORKPLACES REQUIRED TO HAVE A FALL PREVENTION PLAN

1. Any worksite.
2. Any shipyard.
3. Any factory engaged in the processing or manufacturing of petroleum, petroleum products, petrochemicals or petrochemical products.
4. Any premises where the bulk storage of toxic or flammable liquid is carried on by way of trade or for the purpose of gain and which has a storage capacity of 5,000 or more cubic metres for such toxic or flammable liquid.
5. Any factory engaged in the manufacturing of —
  - (a) fluorine, chlorine, hydrogen fluoride or carbon monoxide; or
  - (b) synthetic polymers.
6. Any factory engaged in the manufacturing of pharmaceutical products or their intermediates.
7. Any factory engaged in the manufacturing of semiconductor wafers.
8. Any factory not falling within any of the classes of workplaces described in paragraphs 1 to 7, and in which 50 or more persons are employed.

Made this 15th day of April 2013.

LOH KHUM YEAN  
*Permanent Secretary,  
Ministry of Manpower,  
Singapore.*

[C010-048-00016; AG/LLRD/SL/354A/2010/11 Vol. 2]

(To be presented to Parliament under section 65(8) of the Workplace Safety and

Health Act).