

Date of printing: 21. 8. 2024



Scope of validity:

ORLEN Unipetrol RPA s.r.o. (including BENZINA and POLYMER INSTITUTE BRNO branches)

WORK AT HEIGHTS

Approved by:

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Valid from:

1. 9. 2024

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List of changes

Change number	Page number		Subject of change	Valid from	Approved by (position, signature)
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Notice: The change procedure is carried out according to Directive 821.

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1 Purpose

The directive establishes the conditions for ensuring the safety of persons at risk of falling when working at heights and work above free depth and the conditions for securing workplaces with the activities in question.

Violation of the rules set out herein can be perceived as a gross violation of SAFETY, and as such can only be punished by an offender's absolute ban on entering the Premises and sanction by their employer under the concluded and valid contract and also under generally binding valid legal regulations.

2 Scope of Validity

The document is valid for the following designated companies/branches:

- ORLEN Unipetrol RPA s.r.o. BENZINA, subsidiary plant
- POLYMER INSTITUTE BRNO, subsidiary plant

This edition replaces Directive 420 "Work at heights", 1st edition, dated 1st December 2018

The directive is binding for employees of the company and spin-off plants, as well as for external suppliers (contractors and subcontractors).

The availability of the directive for external suppliers (contractors and subcontractors) is ensured via the Internet: <https://www.unipetrolrpa.cz/en/ServicesandChempark/ChemparkZaluzi/BindingRegulationsandInformation/Pages/default.aspx>.

3 Terms, Definitions and Abbreviations

PPE registration sheet	- a sheet used to record revisions and periodic inspections of specific PPE.
Collective securing systems	- approved protective and arresting structures (protective railings, protective fencing, scaffolding, hatches, arresting fencing, arresting scaffolding, protective nets, work platforms, etc.) with sufficient load-bearing capacity.
Anchoring point	- point or location for anchoring PPE protecting against fall from height Any clamping point that is determined according to Government Regulation No. 362/2005 Coll. either by the technological procedure for a specific job, or it is determined by a professionally qualified employee appointed by the employer. (e.g. a professional competent in risk prevention, senior employee)
Anchor point	- a fixed point on the anchoring device that is intended for the attachment of PPE by the manufacturer of the anchoring device.
Anchoring device	- an assembly of one or more anchor points (or movable anchor points) intended for use as part of a fall protection system.
Emergency	- a temporally and spatially limited undesirable event resulting in a threat or damage to the health or life of persons, property, environment, workplace or reputation.
Hazardous area	- area above which work is being performed and in which there is a risk of people or objects falling, due to the nature of the work.
PPE	- personal protective equipment.
Personal securing systems	- PPE for work positioning and prevention against falls from height (work positioning systems) and against falls from height (fall arrest systems). They are used independently or in combination with elements and components of systems and in accordance with the instructions for use supplied by the manufacturers.
Professional competent in RP	- Professional competent in risk prevention.
Company – ORLEN Unipetrol RPA s.r.o.	

4 Work at heights

4.1 Securing people against fall

4.1.1 Collective and personal securing systems

Protection of persons against falling must be carried out by collective or personal protection at all workplaces and access roads located at any height above water or above substances threatening the life or health of persons in the event of a fall, for example by burns, corrosion, acute poisoning, suffocation and at all other workplaces and access roads, if they lie at the height of more than 1 m above the surrounding level, or if the free depth below them exceeds 1 m.

4.1.2 Collective securing systems

Protection against falling is ensured by the employer preferably by means of collective protection systems (hereinafter referred to as collective securing systems), which mainly include technical structures, e.g. guardrails, hatches, arresting scaffolds, nets and temporary construction structures, e.g. scaffolding.

4.1.3 Personal securing systems

Personal protective equipment which are personal protective work equipment preventing against falling (hereinafter referred to as personal securing systems), are used in the event that the nature of the work precludes the use of collective securing systems or if the use of such means with regard to the nature, expected scope and duration of the work and the number of people is inexpedient or insufficient with regard to the personal safety of people. This mainly includes safety harnesses, fall arresters with fall absorbers, carabiners, self-winding systems, etc.

4.1.3.1 Based on their characteristics, personal securing systems are intended for:

- preventing access to the area in which there is a risk of falling (1.5 m from the edge of the free depth),
- keeping the person in a working position so that falling from height is completely prevented,
- safe arrest in the event of a fall.

4.1.3.2 Personal securing systems must:

- comply with legal and other requirements and be used in accordance with the manufacturer's instructions and this directive and only for the activities for which they are intended. The appropriate work equipment for personal securing and its place of attachment (anchoring device, anchor point) is determined by the processor of the technological or work procedure or the person managing the work at heights. The anchor points must be sufficiently resistant in the direction of fall (e.g. girders, cross-beams, beams, etc.),
- be registered by the employer for the entire period of use through the "Registration sheet",
- be used only by persons familiar with the conditions for their use (including possible anchorages) and with the appropriate health capacity. Lecturing and verification of knowledge is implemented through the safety department for the company's own employees,
- be inspected and tested at least once a year in accordance with the manufacturer's instructions and then subjected to a functional test after each emergency (arresting of a person, extreme stress, etc.). The dates of regular checks are arranged through the safety department for assets owned by the company,
- always be visually checked by the user before their use, with a focus on completeness, operability and sound condition,
- be taken out of use if they are damaged, incomplete or used to arrest a fall.

4.1.3.3 When using personal protection equipment, it is particularly necessary to ensure that:

- the anchor point is placed, if technically possible, at a height above the head of the person performing the work. If this is not possible and the employee is anchored at the foot level, it must be taken into account that a minimum fall depth of 6.3 m is needed to safely arrest a fall,
- in the event of a fall, the user should have enough free space above the obstacle (terrain, floor, structure, etc.) It is necessary to take into account the height of the user, the location of the anchor point and the length of the torn shock absorber (in the event of a fall, it can unfold from the original length of approx. 20 cm up to a length of 160 cm depending on the weight of the user and the length of the fall),

- the full-body fall arrest harness has been equipped with:
 - a connecting eye in the shape of the letter D (on the chest or on the back) marked with the letter A. Harnesses that are equipped with two strap eyes on the chest (instead of a connecting eye) must always have these eyes connected by a carabiner with a safety device during use,
 - carabiner with a safety locking device,
 - with a rope (strap, elastic rope) with a fall absorber,
 - hook at the end of the rope.
- if there is a need to move to another anchor point, then the fall arresting harness must be equipped with two ropes, each one with a hook.
- when moving to another attachment point (anchor point), the person performing work at heights must still be secured with personal protection equipment,
- employees must not work alone without the supervision of another employee, if their protection is not ensured otherwise, e.g. by setting up telephone checks in the agreed time schedule, working under the control of a camera system, etc. If an employee works alone, the work procedure must be described, including a risk assessment before the work itself begins,
- the maximum length of all connecting elements (fall absorber, connecting rope, carabiners, hooks) must not exceed 2 meters.

4.1.3.4 Personal securing means must also be used in the event of the need to lean from places equipped with collective protection.

4.2 Openings in the floor, terrain depressions

4.2.1.1 Openings in the floor and terrain depressions, the plan dimensions of which exceed 0.25 m in all directions, must be covered with covers of adequate load-bearing capacity secured against movement immediately after their creation.

4.2.1.2 The edges of the openings (e.g. exposed grid elements, exposed channel covers, the distance of the scaffolding floors from the face of the wall) must be secured by a technical means of protection against falling, for example a railing or fence.

4.3 Protection against objects and material falling

4.3.1 All material, tools and aids must be transported, deposited, or stored at heights in such a way that they are secured against falling, sliding or being knocked down by the wind both during and after the work. This is also about the security of small elements with regard to slatted floors and structures with free passages.

4.3.2 It is forbidden to hang work tools on parts of clothing, unless they are specially adapted for this or appropriate equipment is used.

4.3.3 Constructions for work at heights must not be overloaded; the weight of material, aids, tools, including people, must not exceed the load capacity of the structure specified in the accompanying documentation.

4.4 Safety measures under the place of work at heights and its surroundings, dropping of objects

4.4.1 Before starting any work, it is always necessary to secure the area at risk. With regard to risk assessment when working on tall objects, for example on chimneys, masts, cooling towers, etc., the area at risk is a strip with the width determined by **table - 1** around the entire perimeter of the base of the object. The area can be secured, for example, by excluding it from traffic by fencing, surveillance, etc.

Table 1 – delineation of the hazardous area:

Workplace elevation	Secured area (m)	Secured area when using a pulley or winch (m)
up to 3 m	based on local conditions	based on local conditions
from 3 m to 10 m	1.5m	2.0m
from 10 to 20 m	2.00m	2.50m
from 20 to 30 m	2.50m	3.00m
more than 30 m	1/10 of the object height	1/10 of the object height + 0.5 m

4.4.2 Objects and material can be dropped on the places below only if:

- the area opposite to the place of impact is secured against the entry of persons (by fencing, exclusion of traffic, supervision) or, depending on the evaluation of the risks of specific work, by a combination of several measures,
- the area around the point of impact is protected against the possible rebound or splashing of the dropped material,
- it is dropped through a closed chute to the place of storage,
- measures are taken to prevent excessive dustiness, noise and other adverse effects.

4.4.3 Material cannot be dropped if the point of impact cannot be predicted.

4.5 Workplaces above each other

4.5.1 Work in workplaces situated above each other can only be carried out exceptionally, if it is impossible to do without them for work-technical reasons. The technological procedure must include a way to ensure the safety of people at the workplace located below.

4.5.2 Sufficient free space for handling the material must be provided under the points of extraction, lifting and lowering of the material. During the entire period of these works, access to the endangered area must be prohibited to persons who are not intended for these works.

4.6 Vertical transport of material, work tools and objects

4.6.1 The vertical transport of material must take place at any moment in a controlled manner (e.g. by lowering - small bags, possibly using a crane).

4.6.2 During the vertical transport of material, work equipment and objects using a rope and a carabiner, it must always be ensured that the rope does not slip out of the hands with the subsequent fall of the lifted/lowered load. The specific method of this insurance, due to the level of risk, will always be determined by the supervisor or their superior.

4.6.3 It is forbidden to use the means of personal protection against falling to transport material, work equipment and objects.

4.7 Work on the roofs

4.7.1 Employees performing work on the roof must be protected against:

- falling from roof coverings on unprotected edges
- Collapse of roof structures

4.7.2 Protection against falling from the roof is understood not only around the perimeter of the roof, but also into skylights, technological and other openings.

4.8 Use of mobile working and lifting platforms (hereinafter referred to as platforms)

- 4.8.1 Platforms and aerial work platforms must comply with the regulations to ensure the safety of the work of technical equipment by their design, execution and technical condition. Platforms and aerial work platforms must be equipped with suitable means to prevent people or material from falling out.
- 4.8.2 Self-rotation and tilting of the platform or basket must be prevented by appropriate means (e.g. by using a swivel hinge or by hanging on a large number of ropes).
- 4.8.3 The platform or aerial work platform must be checked before each use to ensure sufficient safety for the transport of people. These checks must be recorded.
- 4.8.4 Only a person who has the appropriate professional and medical qualifications for this activity and is familiar with its operating instructions may operate the work platform.
- 4.8.5 Before starting work, the platform must be firmly stabilized to prevent it from tipping over.
- 4.8.6 The maximum load of the aerial work platform must not be exceeded. The platform must be equipped with a protective railing with the height of at least 1.1 m.
- 4.8.7 When working from a platform and protective enclosure, each person must be secured against falling by personal protection, unless otherwise specified by the manufacturer's instructions.
- 4.8.8 Each platform must be equipped with a device that allows safe return from the height to the ground in the event of a power failure.
- 4.8.9 In the event that the platform interferes with a public road during work, a permanent presence of a supervisor equipped with high-visibility clothing class. protection II or III must be ensured.
- 4.8.10 The area below the working platform must be secured in accordance with Article 4.4.

4.9 Temporary construction structures, ladders

The issue of temporary construction structures and ladders is dealt with by directive 425 "Use of temporary building structures (scaffolding)", or by directive 427 "Portable ladders, racks and trolleys".

4.10 Interruption of work at heights

- 4.10.1 In the event of adverse weather conditions, the work supervisor is obliged to ensure that the work is interrupted. Adverse weather conditions, which significantly increase the risk of falling or slipping, are considered when working at heights:
- storms, rain, snow or ice formation,
 - fresh wind with a speed exceeding 8 m.s⁻¹ corresponds to 28.8 kph (wind force of 5 degrees Bf) when working on suspended work platforms, mobile scaffolding, ladders above 5 m of working height and when using a rope suspension for work positioning systems; in other cases, a strong wind with a speed of above 11 m.s⁻¹ corresponds to 39.6 kph (wind force of 6 degrees Bf),
 - visibility at the workplace of less than 30 m,
 - ambient temperature below -10 °C during work.
- 4.10.2 In cases where, from an operational and safety point of view, it is necessary to carry out a certain handling or other activity from fixed platforms, walkways, scaffolding with collective protection (fixed railings) even under the conditions defined in Article 4.10.1, the person managing the work, in cooperation with a professional competent in risk prevention, must adopt risk mitigation measures within a given hazardous situation. Work at heights with personal protection (safety harness) is prohibited in these cases.

4.11 Emergency, evacuation

- 4.11.1 Emergency scenarios (accident, sudden nausea, loss of consciousness, etc.) in the event of the need for a sudden rescue of a person performing work at heights must be assessed as part of the work permit procedure. In emergency scenarios, it is necessary to take into account, in particular, the possibility of providing first aid and evacuation to 0 meters from the site accessibility point of view, the method of reporting possible emergency events (e.g. the need to ensure evacuation via a work platform) and the accessibility of first aid equipment and the availability of emergency services to provide first aid.

5 Responsibility

Responsibility is given by the provisions of Chapter 4.

6 List of Related Documents

- Act No. 262/2006 Coll Labour Code, as amended
- Act No. 309/2006 Coll., on Further Requirements for Occupational Safety and Health
- Government Regulation No. 362/2005 Coll. on Specific Requirements for Safety and Health Protection during Work where a Risk of a Fall from Height or to a Depth is Concerned
- Directive 427 "Portable ladders, racks and trolleys"
- Directive 425 "Use of temporary building constructions (scaffolding)"
- Instructions for use from the manufacturer