Fachgruppe D-A-CH-S
Absturzsicherung

Factsheet

# Industrial rope access

## Rope access and positioning techniques

## The Basics

- Safety installations (i.e. railings, nets, and scaffolding) and technical solutions (i.e. scissor lifts, etc.) always take precedent on site.
- Rope access techniques may only be considered, where the construction of safety installations and other solutions are not possible, or pose a greater risk to the worker than working in a harness.

**1. Rope access always requires redundant safety measures.**

## The following conditions must be fulfilled:

- Only properly trained personnel are permitted to work in dangerous conditions.
- A site-specific safety and rescue plan must be set in place (including environmental hazards)
- Only use certified and well maintained equipment.
- Every worker's rope scheme must consist of two separately anchored ropes that are in turn connected to each other (system redundancy).
- Every climbing area must consist of at least two workers capable of monitoring, and, in case of an accident, rescuing the other.
- Access to the work and rappel site must be safely constructed.
- All working areas must be able to communicate between each other.
- All workers must understand the climbing and rescue procedures / techniques.
- Areas that pose a risk for third parties (above and below) must be determined and secured.
- Heavy machinery must be separately secured (separate ropes and anchor points).
- First aid equipment and the maximum response time for emergency medical technicians should be determined for the site (independent of any aerial rescue possibilities).

## rope access is:

Work in which the worker is secured directly by one rope, while a second serves as a redundant anchor in case of a systematic failure of the first.

**2:** Redundancy means: Using two independent ropes simultaneously, which have separate anchor points. (Illustration: Petzl)

**D-A-CH-S?**

**D-A-CH-S** is a international group of Experts from Switzerland, Germany, Austria and South Tirol (Italy) whose aim is to create harmonized rules / best practices in a compact form.
Latest results of research and development are taken into consideration, but national laws and rules remain always in effect.

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Download: www.bauforumplus.eu/absturz

# Exception

**The following is not considered as rope access:**

- Work in which a rope is only used as a secondary precaution. ⇨ Personal fall protection equipment (i.e. fall protection on roofs, ropes limiting access to dangerous areas, etc.)

# The Training Concept

**Three level training in concordance with international standards**

Every level involves a 5 day course and concludes with a final exam.

- **Level 1 / L1: rope access technician**
  Entry level course for trainees without practical experience. Covers the basic climbing techniques, legal background, equipment, standardization, and rescue from above.
- **Level 2 / L2: Team Leader rope access**
  Required: Successful completion of Level 1
  Further work and climbing techniques (i.e. setting up a horizontal rope system, transferring between different rope systems), setting up a rope system, the basic distribution of forces, anchor techniques, rescue from all directions, etc.
- **Level 3: Project Manager rope access**
  Required: Successful completion of Level 2
  This course involves advanced risk assessment system planning, project management, force distribution, and risk evaluation and management.

**Swiss training centers and international standards:**

A list of training centers and standards considered to be up to common standards, are available at: www.suva.ch/seil or www.fallprotection.ch

# Safety Concept

Rope Access is an activity with considerable dangers. Not only is personnel-training especially important, but of course prep-work as well. A written, site-specific safety and rescue concept must be created for every job site. In addition to fall protection, other potentially dangerous aspects must be considered.

**For example:**

- Harmful substances in construction materials and the air
- Dangerous electrical installations
- Environmental dangers such as avalanches or falling rocks

**3** The risks involved in working in a natural environment have to be constantly reexamined.

# Training Goals

- **Level 1:** (basic-rope access technician)
  He is able to perform a basic range of rope access and rescue tasks under the supervision of a Level 2.
- **Level 2:** (Team Leader)
  Same as L1, plus a role as team leader with complex rescue, rope access and rigging skills. At least one team leader per team and worksite must be present at all times.
- **Level 3:** (Project Manager)
  Like L1 + L2, plus analysis, planning, dimensioning, creating a site-specific safety concept (= extensive knowledge of techniques). The project manager does not have to be present at all times.

## Constant Reevaluation and Observation

- **Environmental dangers such as avalanches or falling rocks**
- **Weather (heat, cold, storms)**
- **Harmful substances in construction materials and the air**
- **Electrical dangers**

## Relevant Standards

| | |
|---|---|
| EN12841 | Rope adjustment devices |
| EN361 & EN 358 | Full body harnesses |
| EN813 | Sit harnesses |
| EN795 | Anchor devices |
| EN1891 | low stretch kernmantel ropes |
| EN363 | Fall arrest systems |

**Further information on related topics**

Suva-CL 67061.D Emergency Planning (www.suva.ch/waswo/67061)
Suva-CL 67154.D Alpine Work Sites (www.suva.ch/waswo/67154)
Suva-Factsheet 33019: Safety Concept for environmental Dangers (www.suva.ch/waswo/33019)
www.suva.ch/seil
www.fallprotection.ch