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SAFETY AND HEALTH TOPIC SHEET NO. 9: UNCONTROLLED DESCENT

A safety and health 'topic sheet' aimed at raising awareness of hazards in the rope access industry. The series may be of use as a toolbox talk.

1 INTRODUCTION

1.1 An uncontrolled descent may occur during rope access work, or during training. A candidate during training may be less experienced, or display a lack of familiarity with the equipment being used. They may also be handling a 'casualty' (increasing the mass), with the potential for injury to both parties.

1.2 An uncontrolled descent may not be a 'free fall', which would involve a loss or failure of one or more parts of the system, e.g. severed rope or rigging point failure.

2 WHAT CAN GO WRONG …

2.1 A technician may lose control of their descender, either through failure or incorrect use.

Case Study

Whilst carrying out a task on a slope, an item of equipment suspended on a fabric sling was passed across the body of the technician, to be suspended on the opposite side. When changing the position of the equipment the sling became tangled with the handle of the descender accidentally operating it.

The back-up device did not arrest the fall and the descent only stopped when the operative lost their footing and the descender handle was freed from the tangled sling.

The outcome of this incident was a twisted ankle and some bruising.

3 WHY THINGS CAN GO WRONG …

3.1 Failure of the descender may be as a result of:

- Incorrect use;
- A failure to 'lock off' the device, either mechanically or by other means;
- Accidental operation, e.g. external source.

3.2 The choice of back-up device, and method of use, will affect the arrest of an uncontrolled descent.

3.3 The potential outcome of this type of incident can be a serious injury or fatality, especially if it occurs at low level or if there are obstructions or a structure below.

Case Study
A technician was using a descender and – for reasons not clear – lost control of their descent and fell to the ground. The descender did not have a 'anti panic function' and the technician was inexperienced in its use. The back-up device was being used contrary to the manufacturer's instructions.

4 WHAT YOU CAN DO …

4.1 Control measures include:

- The selection and use of suitable equipment. When selecting a descender and back-up device consider the conditions and work type. Different descending devices may be more suitable in different work situations. For example, this may be down to a device's ability to mechanically lock or its effective use on a slope, etc.
- Training and familiarity with equipment being used. A technician at any level may be trained and undergo assessment on a set of equipment not used by the rope access company they work for. The latter should ensure that 'familiarisation' training is provided, as well as periodic refresher training.
- Using equipment that conforms to an appropriate standard.
- Ensuring that the equipment is maintained in good working order.
- Using equipment with a mechanical lock or a 'panic locking' function.
- The close supervision of inexperienced technicians, in particular.
- Selecting equipment that is suitable for two-person loading (rescue) whilst maintaining controlled descent.

5 HOW YOU CAN DO IT …

5.1 Know what your policies say about the selection of a back-up device. Discuss the following points:

- Weather conditions. For example, some devices maybe less effective on wet ropes; some maybe harder to operate in cold conditions.
- The mass of the operative can make some descenders more difficult to use.
- Some descenders and back-up devices are much less effective when working on slopes.
- Rope contamination, e.g. mastic or paint on ropes, may influence both descenders and back-up devices.
- Used ropes and friction damage may affect performance.
  NOTE: Most product testing, type-testing and type-approval is undertaken using new rope.
- Mechanical defects or wear.
- The application of additional friction during descent (especially for rescue, where the mass is increased).

6 ACTION

6.1 Review your management system for the selection and use of the appropriate equipment to avoid uncontrolled decent.

7 REFERENCES

7.1 Further information can be found in:

(a) IRATA International code of practice for industrial rope access (Third edition, September 2016)[1]:

- ICOP 2.7.5, Descending devices

7.2 For a list of current (and past) 'safety communications' by IRATA, see www.irata.org

8 RECORD FORM

8.1 An example *Safety and Health Topic Sheet: Record Form* is given below. Members may have their own procedure(s) for recording briefings to technicians and others.

[1] www.irata.org/default.php?cmd=215&doc_id=4336

IRATA SAFETY AND HEALTH TOPIC SHEET – RECORD FORM			
Site:			
Date:			
Topic(s) for discussion:		Topic Sheet No. 9: Uncontrolled descent	
Reason for talk:			
Start time:		**Finish time:**	
Attended by *Please sign to verify understanding of briefing*			
Print name:		**Signature:**	
Continue overleaf (where necessary)			
Matters raised by employees:		**Action taken as a result:**	
Continue overleaf (where necessary)			
Briefing leader *I confirm I have delivered this briefing and have questioned those attending on the topic discussed.*			
Print name:	**Signature:**	**Date:**	
Comments:			