



Interaktives Lernprogramm für Arbeit und Rettung in absturzgefährdeten Bereichen

e-RESCUE

Interactive training program for work and rescue in fall endangered areas

AG Training / WG Ausbildung



Draft

Definition of skills necessary for the Basic Course, "Special Rescues from Heights and Depths" (SRHT)

Permanence of training (education): 80 hours

Aim of training (training target): The member of the course must

- know the equipment for the special rescue
- know the possibilities and limits of the operation (response)
- be able to practise the techniques of special rescue with efficiency and be able to guarantee highest security at the same time

Emphasis of the training (key course element):

- Laws and regulations
- Accommodation to altitude, techniques of belay
- anchor points/fixing points
- knotting,
- techniques of ascending and descending
- techniques of rescue operation (response)/possibility of rescue operation (response)
- fundamental rescue variants, evacuation of persons (technical rescue)

Prerequisites (conditions):

- Basic training in a fire brigade maybe special courses for the special rescue or mountain rescue, cave rescue
- Fitness for the altitude

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
1.	Theory				
1.0	Opening the training	2	know content, characteristics and target of the training	Introduction of the course-members Introduction the content and the characteristics of these training	Lecture Training discussion
1.1	Main terms/Definitions	2	Know and explain the definitions and terms of SRHT	Fall factor, Impact force, Protection against fall, Special rescues from heights and depths, normed fall, ...	Training discussion e-learning
1.2	Tasks, options and limits for SRHT	2	Know the difference between AS and SRHT Know the limits of operation	Tasks (Technique rescue of persons and animals from embracing situations,) Options and limits (possibility of access, fire, weather, rays,)	Training discussion Multimedia
1.3	accident prevention regulation	2	Know accident prevention regulation/ is able to transfer to incident situations	General behaviour during the training/incident Behaviour at the training object Handling with the equipment EU- Framework guidelines National legislation	Training discussion Install a link on website of eusr for actuality regulations
1.4	Theory of ropes	3	Know kinds of rope and be able to describe and explain its limitations of use Be able to describe and explain the tasks of rope Be able to do a correct maintenance and to make out proofs for rope and also recognize damaged ropes	kinds of rope Construction/ production of the rope Technical figures, characteristics Handling Maintenance/ Service / elimination Limits for loads, forces, ... Possibilities of damage / protection	Lecture Training discussion e-learning

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
1.5	Material and tool science	3	Declare and describe material and tools of SRHT Maintenance according to the norms/ regulations, knowledge of the proof of service recognize defect tools	belt/full body harness textile material (sling ...) rope braking device descending and rescue device other tools technical data purpose of employment Maintenance/ Service / elimination	Training discussion Teamwork e-learning experiments of hanging in different harness systems
1.6	knotting	1	Declare different knots and describe the use Knows fundamental principles by making and using knots	possibility of use Kind of knots Clove hitch figure of eight knots Thumb knot/ overhand tape knot larks foot prusik knot Fishermans italian hitch blip knot	Training discussion Teamwork e-learning
1.7	Technique of safeguards	2	know and use the kinds of safeguard and its differences during the training and in the employment and transferred to similar situations Safeguard principles know and use	Kinds of belay: Chain of belay directly belay indirectly belay static belay dynamic belay construction / function physical effects particularities sources of mistakes principles of belay	Training discussion Teamwork e-learning

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
1.8	Options of rescue	2	Know and declare basic rescue options	Rescue of persons from the deep Rescue of persons from the height Rescue of persons out of the rope Lead climb Rescue of persons with cable way between 2 points	Training discussion
1.9	Specially situations	2	Know critical situations, which could event in operation and training Must be able to react in similar situation in operation and training	Behaviour in special situations, common principles Suspensions trauma fall, rupture of the rope getting jammed	Training discussion
1.10	casualty pulleys systems	3	Declare and describe casualty pulleys systems	Factor pulley system Potential pulley system construction and action (mode of operation)	Training discussion Teamwork
1.11	stretchers	1	Declare and describe possibility of rescue with a stretchers	Rescue options principles in rescue with stretchers	Training discussion Teamwork
1.12	Written examination	2		90 min. examination	
1.13	Analysis	1		Feedback Deliver (deal) certifications	

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
2.1	Preparation of exercise/training	1	Introduction in the specific contents and procedures of options for exercise/ action	Features of objects Dangers at exercise objects Security advices	Practice instruction PU 1
2.2	Knotting	3	Be able to master and use knots in each situation	Binding and connecting Merge of persons Fastening/ making To master and use Clove hitch figure of eight knots Thumb knot/ overhand tape knot larks foot prusik knot Fishermans italian hitch blip knot	Practice instruction PU 1-4
2.3	Practice basic training	16	Master kinds/methods and techniques of protection (safeguard) and be able to use it master construction of the carrying system and be able to use it	Self securing from fall in the area of risk built (construction) of different protection methods belayed lead climb chain of belay indirectly belay dynamic belay static belay built of descending systems (active, passive)	Practice instruction PU1-4 Station training

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
2.3 cont.			Be able to master the general courses of action of the SRHT in each situation Be able to provide the security of task forces in the place of employment be able control the use of fixing points in every situation Be able to make knots under less favourable conditions	Execution of safeguards during the lead climb and when roping Fastening ropes at suitable fixing points Elevator habituation pendulum fall Catch a fall (dummy) Roping exercises for habituation with rescuer with patient in the rescue triangle with stretcher as a patient secured ascending at the vertical rope Rise with Prusik Rise with roping equipment Rise with different climbing assistance Rise with press air-breather Climb on rope-ladder Knot training with darkness hanging at one hand on the back de- or ascend over knots in rope)	Practical instruction PU 1-4 Station work
	Practical special training	7	Be able to use rescue techniques correctly and independently and to explain them	construction and rescue actions of cable ways with and without stretchers Rescue from the depth Rescue from the depth under less favourable conditions	Practical instruction PU 1-4 Station work

Nr.	Theme / content	Hours	Main learning target The member of the training shall..	Training contents	Training methods
2.4	Location-referred object training	7	Master rescue techniques employ it correctly and independently, be able to use and explain it	Fixing point search Rescue exercise with stretchers Structure of different rescue variants in the group Passive roping and again drawing up of persons Active roping and rescue of persons Rescue of a person out of the rope Structure of casualty pulleys systems	Practical instruction Station work
2.5	Practical training at the object (crane)	7	Be able to proceed rescue accomplish techniques correctly and independently, to use and explain be able to recognize the subject-related dangers	Endangerment analysis at the crane Vertical, secured ascent Horizontal lead climbing Simply descending from the arm Rescue in the hanging seat /rescue triangle	Practical instruction PU 1-4 Station work
2.6	Practical training at the object (high rise building)	7	be able to proceed rescue techniques correctly and independently, to use and explain be able to recognize the subject-related dangers	Specific characteristics Endangerment analysis at the high rise building Fixing points Positions /possibilities to get out or in of the rope/ the building (point of rescue) Sharp edges Height determination Special dangers Simply descending (actively passive) Rescue hanging seat (actively passive) Structure of casualty pulleys systems rescue with stretcher Secure/ belaying	Practical instruction PU 1-4 Station work
2.7	Practice examination	4		30 min each person	
2.8	Total theory/practice	29/51			
	total	80			

The wording of the main learning target is taken over from the fire-brigade regulation 2 (FwDV 2) (see attachment).

Level of training target (training aim stages) in the realization range (source: FwDV 2)

Within the fore mentioned training aim ranges there are 4 different Levels of training targets (training aim stages)

- Level of training target 1 **knowledge,** in the sense of "being able to name"
- Level of training target 2 **understanding,** in the sense of "being able to describe and/or explain with own words"
- Level of training target 3 **practise,** in the sense of "being able to transfer anything which was understood once to similar situations"
- Level of training target 4 **evaluation,** in the sense of "being able to value and justify new situations, the value of material, methods and procedures for certain situations"

For reaching the respective Level of training target (training aim stages) following methods of instruction are necessary:

LTT:	target	Method of instruction	wording
LTT 1:	knowledge	Minimum lecture Training discussion if there is enough time	- must be able to name, - must be able to show/ reproduce
LTT 2:	understanding	Training discussion Work in team/ with partner	-have to be able to explain, -have to be able to describe
LTT 3:	Use/ practise	Work in team/ with partner exercise, exercise with divided parts, Specimen of instruction	Have to be able to transfer and to use to similar situations the subjects with were taught
LTT 4:	evaluate	Work in team/ with partner exercise , exercise with divided parts	- must be able to judge the subjects with were taught, - must be able to derive measures

Level of training target (training aim stages) in the action / behaviour range (source: FwDV 2)

If the aim of the training is in the range of action/behaviour, there are also 4 different Levels of training target (training aim stages)

- Level of training target 1 **Imitation,** in the sense of "being able to do activities and handle the same grips, which are demonstrated by the instructor "
 (However it can never be the purpose of fire-brigade training, that the course participant can only copy activities!)
- Level of training target 2 **Independent acting,** in the sense of "being able to independent proceed of activities"
- Level of training target 3 **Precision,** in the sense of "being able to do activities not only independent and correct, but beyond that briskly and accurately"
- Level of training target 4 **Automation of action,** in the sense of "being able to do activities in every situation fast, without error and absolutely safe"

For reaching the respective training aim stages methods of training the following specified methods of instruction are necessary:

LTT:	Target	Method of instruction	wording
LTT 1:	Imitation	Practice instruction	must be able to copy actions
LTT 2:	Independent acting	Practice instruction (PU step 3*) Station training	must be able to accomplish or proceed entirely courses of action without instructions ;
LTT 3:	Precision	Practice instruction (PU step 4*) Station training	must be able to accomplish and explain technically correctly and independently entire courses of action s
LTT 4:	Automation of action	Practice instruction (PU step 4*) Station training Operation exercises Exercises on model	must be able to have command over courses of action in every situation